



DEPARTMENT OF THE AIR FORCE
ENHANCED TRAINING IN IDAHO
ENVIRONMENTAL IMPACT STATEMENT

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Summary of Contents by Volume

All volumes are listed and the contents of this volume are highlighted.

Preface Volume

- Readers' Guide: Summarizes EIS changes resulting from public comments and agency inputs
- Executive Summary: Summarizes the ETI EIS results
- Recommendation of Preferred Alternative: Identifies the Air Force Preferred Alternative
- Mitigation Measures: Describes actions to reduce environmental consequences and/or public or agency concerns

Volume 1

- Chapter 1: Describes purpose and need of the proposal to Enhance Training in Idaho
- Chapter 2: Presents the alternatives including no-action and three training range alternatives
- Chapter 3: Delineates the baseline condition of the affected environment for each environmental resource
- Chapter 4: Addresses the environmental consequences of the four alternatives, including cumulative impacts
- Chapter 5: Presents irreversible and irretrievable commitment of resources if an action item were selected
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Volume 2

- Overview: Describes public review and comment response process
- Public and agency comments: Includes hearing testimony and written comments
- Response to comments: Responds to comments and/or identifies where responses can be found in the FEIS

Volume 3 (originally Volume 2 of the DEIS)

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13. ABSTRACT (Maximum 200 words) The ETI Final Environmental Impact Statement (EIS) evaluates four alternatives to enhance training for aircrews of the 366th Wing based at Mountain Home AFB, ID. The EIS was prepared in accordance with the National Environmental Policy Act (NEPA). It also has appendices to meet requirements of the Federal Land Policy and Management Act and its associated regulations for public land withdrawals. The Final EIS includes analyses of the potential environmental consequences of each alternative on airspace, noise, safety, hazardous materials, earth resources, water resources, air quality, biological resources, cultural resources, land use, recreation and visual resources and socioeconomics. The findings indicate that potential environmental impacts from any one of the range development alternatives include increased aircraft-related noise in the expanded portions of the MOAs, decreased aircraft-related noise in portions of existing MOAs, negligible to moderate impacts on habitat for wildlife and vegetation, disturbance to cultural resources eligible or potentially eligible to the National Register of Historic Places (National Register) and possible environmental effects of range alternatives combined with past, present and future projects or actions. The Juniper Butte Alternative was recommended as the Air Force's preferred alternative.				
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Final Environmental Impact Statement

Volume 3
Chapters 7 through 11
Appendices

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7.0 REFERENCES

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- Adams, M. 1986. Sagebrush Post Offices: A History of the Owyhee County Country. Idaho State University Press. Pocatello.
- Advisory Council on Historic Preservation (ACHP) and GSA Interagency Training Center. 1994. Introduction to Federal Projects and Historic Preservation Law. Participant's Desk Reference. A Section 106 Training Publication. ACHP and GSA.
- Aircraft Environmental Support Office (AESO). 1987. Gaseous Emissions from Aircraft Engines, AESO Report No. 1-87. Naval Aviation Depot North Island. September. San Diego, CA.
- _____. 1990. Gaseous Emissions from Aircraft Engines, AESO Report No. 6-90. Naval Aviation Depot, North Island, California.
- AKZO Chemicals, Inc. 1991. Titanium Tetrachloride. Material Safety Data Sheet (MSDS). Chicago, IL. November.
- Allen, A.W., J.G. Cook, and M.J. Armbruster. 1984. Habitat suitability index models: Pronghorn. U.S. Fish and Wildl. Serv. FWS/OBS-82/10.65. 22 pp.
- American National Standards Institute (ANSI). 1980. Sound Level Descriptors for Determination of Compatible Land Use. ANSI S3.23-1980.
- _____. 1988. Quantities and Procedures for Description and Measurement of Environmental Sound, Part 1. ANSI S12.9-1988.
- Andersen, D. E., O.J. Rongstad, W.R. Mytton. 1990. Home-range Changes in Raptors Exposed to Increased Human Activity Levels in Southeastern Colorado. Wildl. Soc. Bull. 18: 134-142.
- Anderson, D.C., K.T. Harper, and R.C. Holmgren. 1982. Factors Influencing Development of Cryptogamic Soil Crusts in Utah Deserts. J. Range Mgt. 35:180-185.
- Armstrong Aerospace Medical Research Laboratory (AAMRL). 1994. Calculation Methods for Criteria Air Pollutant Emissions Inventories. Occupational and Environmental Health Directorate Bioenvironmental Engineering Division. July. Brooks AFB, TX.
- Armstrong Laboratory (AL/OE-MN). 1996. Military Operating Area and Range Noise Model MR_NMAP. Occupational and Environmental Health Directorate, Bioenvironmental Engineering Division, Noise Effects Branch, Wright-Patterson AFB, OH.
- Autenrieth, R.E, W. Molini, and C. Braun, eds. 1982. Sage Grouse Management Practices. Technical Bulletin No. 1. Western States Sage Grouse Committee, Twin Falls, Idaho.
- Bailey, R.G. and A. W. Kuchler. 1966. Potential Natural Vegetation of the United States. U.S. Geological Survey. Washington, D.C.
- Barbour, R. W. and W. H. Davis. 1969. Bats of America. University Press of Kentucky, Lexington.

- Basset, J.E. 1982. Habitat Aridity and Intraspecific Differences in the Urine Concentrating Ability of Insectivorous Bats. *Comparative Biochemistry and Physiology*. 72:703-708
- Battis, J.C. 1983. Seismo-Acoustic Effects of Sonic Booms on Archaeological Sites, Valentine Military Operations Area. Air Force Geophysical Laboratory, Report AFGL-TR-83-0304. November.
- . 1988. The Effect of Low Flying Aircraft on Archaeological Sites, Kayenta, Arizona. AFGL Technical Memorandum No. 146. Air Force Geophysics Lab, Hanscom AFB, MA 01731. January.
- Bechard, M.J. and R.P. Howard. 1988. Historical Nest Sites of the Peregrine Falcon (*Falco peregrinus anatum*) in Idaho. Prepared for U.S. Fish and Wildlife Service, Boise Field Office, Idaho.
- Beecham, J.J. and M.N. Kochert. 1975. Breeding Biology of the Golden Eagle in Southwestern Idaho. *Wilson Bull.* 87(4):506-513.
- Bellrose, F.C. 1980. Ducks, Geese, and Swans of North America, 3rd ed., Stackpole Books, Wildlife Management Institute, Harrisburg, PA.
- Berenbrock, C. 1993. Effects of Well Discharges on Hydraulic Heads in and Spring Discharges from the Geothermal Aquifer System in the Bruneau Area, Owyhee County, Southwestern Idaho. U.S. Geological Survey. Prepared in cooperation with U.S. Fish and Wildlife Service. Water-Resources Investigations Report 93-4001
- Bernatas, S. 1991. Final Report for the Rare Plant and Significant Natural Plant Community Inventory of the Saylor Creek Air Force Range. Rocky Mountain Heritage Task force, The Nature Conservancy. Unpublished report on file at the Idaho Conservation Data Center, Idaho Department of Fish and Game.
- Berreman, J. 1937. Tribal Distribution in Oregon. *Memoirs of the American Anthropological Association* 47.
- Beuchner, H.K. 1960. The Bighorn Sheep in the United States: Its Past, Present and Future. *Wildlife Monographs* No.4. In: Stemp 1983.
- Black, B.B., M.W. Collopy, H.F. Percival, A.A. Tiller, and P.G. Bohall. 1984. Effect of Low-level Military Training Flights on Wading Bird Colonies in Florida. Florida Cooperative Fish and Wildlife Research Unit, School of Forestry and Resource Conservation, University of Florida, Gainesville. Technical Report No. 7.
- Blaisdell, J.P. 1953. Ecological Effects of Planned Burning of Sagebrush-grass Range on the Upper Snake River Plains. *USDA Technical Bulletin*.
- Bleich, V.C., R.T. Bowyer, A.M. Pavli, R.L. Vernoy, and R.W. Anthes. 1990. Responses of Mountain Sheep to Helicopter Surveys. *California Fish and Game* 76(4):197-204.
- Bodie, W.L., E. Taylor, and M. McCoy. 1992. IDFG California Bighorn Sheep Ecology. Idaho Department of Fish and Game, Boise, Idaho. September.
- Bodie, W.L., E.O. Garton, E.R. Taylor, and M. McCoy. 1995. A Sightability Model for Bighorn Sheep in Canyon Habitats. *J. Wildl. Manage.* 59(4):832-840.

- Boeker, E.L. and P.R. Nickerson. 1975. Raptor Electrocutions. *Wildl. Society Bull.* 3(2):79-81.
- Boise State University (BSU). 1993. Recreational Usage of Portions of Owyhee County. Conducted for Science Applications International Corporation by the Survey Research Center, Boise State University, Boise, Idaho. May.
- Bonnichsen, B. 1982a. The Bruneau-Jarbridge Eruptive Center, Southwestern Idaho. In: B. Bonnichsen and R.M. Breckenridge, eds. *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.
- _____. 1982b. Rhyolite Lava Flows in the Bruneau-Jarbridge Eruptive Center, Southwestern Idaho. In: B. Bonnichsen and R.M. Breckenridge, eds. *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.
- Bonnichsen, B. and G.P. Citron. 1982. The Cougar Point Tuff, Southwestern Idaho and Vicinity. In: B. Bonnichsen and R.M. Breckenridge, eds. *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.
- Bonnichsen, B., W.P. Leeman, M.D. Jenks, and N. Honjo. 1988. Geologic Field Trip Guide to the Central and Western Snake River Plain, Idaho, Emphasizing the Silicic Volcanic Rocks. In: Link, P.K., and W.R. Hackett, eds. *Guidebook to the Geology of Central and Southern Idaho*. Idaho Geological Survey Bulletin 27. Moscow, ID.
- Braid, R.B. 1992. Incorporation of Public Participation in Environmental Analyses of Low-altitude Flying Operations. *The Environmental Professional*. 14: 60-69.
- Brattstrom, B.H. and M.C. Bondello. 1983. Effects of Off-Road Vehicle Noise on Desert Vertebrates In *Environmental Effects of Off-Road Vehicles. Impacts and Management in Arid Areas*. R.H. Webb and H.G. Wilshire, eds. New York: Springer-Verlag.
- Braun, C.E., M.F. Baker, R.L. Eng, J.S. Gashwiler, and M.H. Schroeder. 1976. Conservation Committee Report on Effects of Alteration of Sagebrush Communities on the Associated Avifauna. *Wilson Bull.* 88:165-171.
- Braun, C.E., T. Britt, and R.O. Wallestad. 1977. Guidelines for Maintenance of Sage Grouse Habitats. *The Wildlife Society Bulletin*. 5:99-106.
- Buechner, H.K. 1960. The Bighorn Sheep in the United States, Its Past, Present, and Future. *Wild. Monogr.* No. 4, 174 pp.
- Bunnell, F.L., D. Dunbar, L. Koza, and G. Ryder. 1981. Effects of Disturbance on the Productivity and Numbers of White Pelicans in British Columbia - Observations and Models. *Colonial Waterbirds*. 4:2-11.
- Bureau of Land Management (BLM). 1979d. Sage Grouse Data, Owyhee Resource Area, Planning Unit 0106, Triangle and Riddle, Idaho 1:100,000 maps. Prepared by Rath-Sands. July.
- _____. 1981. Summary Multiple Use Management Decisions Owyhee Planning Unit. Boise District, Idaho.
- _____. 1982. Bruneau-Kuna Grazing Environmental Impact Statement. Draft. Boise District, Idaho.

- _____. 1983a. Bruneau-Kuna Land Use Decisions Summary and Rangeland Program Summary.
- _____. 1983b. Bruneau-Kuna Management Framework Plan.
- _____. 1984. Owyhee Canyonlands Wilderness Environmental Impact Statement. Draft. Boise District, Idaho.
- _____. 1985a. Elko Resource Area Resource Management Plan and Environmental Impact Statement. Draft. Elko District, Nevada.
- _____. 1985b. Proposed Jarbidge Resource Management Plan and Final Environmental Impact Statement. Boise District, Idaho.
- _____. 1986a. Elko Proposed Resource Management Plan and Environmental Impact Statement. Final. Elko District, Nevada.
- _____. 1986b. Owyhee Proposed Management Framework Plan Amendment and Final Environmental Impact Statement, Wilderness. Boise District, Idaho.
- _____. 1987a. Elko Resource Management Plan Record of Decision. Elko District, Nevada.
- _____. 1987b. Elko Wilderness Environmental Impact Statement. Final. Elko District, Nevada.
- _____. 1987c. Jarbidge Resource Management Plan Record of Decision. Boise District, Idaho.
- _____. 1987d. Jarbidge Wilderness Final Environmental Impact Statement. Boise District, Idaho.
- _____. 1988. BLM Manual, Section 8143. Avoidance and/or Mitigation of Adverse Affects to Cultural Properties. Release 8-47. December 12, 1988.
- _____. 1989a. Idaho Recreation 2000 Implementation Plan, Unlimited Outdoor Adventure. Idaho State Office. May.
- _____. 1989b. Jacks Creek Wilderness Environmental Impact Statement. Final. Boise District, Idaho.
- _____. 1989c. Oregon Wilderness Environmental Impact Statement. Final. Oregon State Office. Vol. 1-4.
- _____. 1989d. Owyhee Canyonlands Wilderness Environmental Impact Statement. Final. Boise District, Idaho.
- _____. 1989e. Fencing. BLM Manual Handbook H-1741-1-Release 1-1572. December 6, 1989.
- _____. 1991a. Bruneau Management Framework Plan Amendment and Environmental Assessment to Consider Area of Critical Environmental Concern Designation. Draft. Boise District, Idaho.
- _____. 1991b. Idaho Wilderness Study Report. Vol 1-5. Department of the Interior.

- _____. 1993. Bureau of Land Management and Mountain Home AFB. Inter-Department Memorandum of Agreement. BLM MOU ID-313.
- _____. 1994a. Ecosystem Management in the BLM: From Concept to Commitment. Information Bulletin No. ID-94-238.
- _____. 1994b. Fire Management Activity Plan. July 1994. Lower Snake River District, Idaho.
- _____. 1995a. Snake River Birds of Prey National Conservation Area Management Plan. Lower Snake River District, Idaho.
- _____. 1995b. Interim Management Policy for Lands Under Wilderness Review.
- _____. 1996a. Annotated 1:100,000 Quadrant Maps for Clover Butte South, Grasmere, and Juniper Butte Quadrants.
- _____. 1996b. Fire Management Activity Plan. Lower Snake River District, Idaho.
- _____. 1996c. Incidental Observations, sage grouse, waterfowl, and raptors. unpublished data.
- _____. 1996d. Owyhee Resource Management Plan and Draft Environmental Impact Statement. Draft. Lower Snake River District, Idaho.
- _____. 1996e. Sensitive Fish Species Distribution Maps, Bruneau, Jarbidge, and Owyhee Resource Areas, Lower Snake River District, Boise, Idaho.
- _____. 1996f. Sage Grouse Lek Site Maps, Jarbidge Resource Area, Twin Falls, Idaho.
- _____. 1997. Database of Recreation Information. Lower Snake River District, Idaho.
- Bureau of Outdoor Recreation. 1976. Bruneau Wild and Scenic River Study Report.
- Burger, J. 1981. The Effect of Human Activity on Birds at a Coastal Bay. *Biol. Conserv.* 211:231-241.
- Burt, W.H., and R.P. Grossenheider. 1980. *A Field Guide to the Mammals*. Boston: Houghton Mifflin.
- California Wildlife Habitat Relationships Database. No date. California Department of Fish and Game, Rancho Cordova, California.
- Carpenter, R.E. 1969. Structure and Function of the Kidney and the Water Balance of Desert Bats. *Physiological Zoology*. 42:288-302.
- CH₂M Hill. 1993. Idaho Army National Guard Helicopter Conversion Draft Environmental Assessment. Prepared for Idaho Army National Guard, Boise, Idaho. March.
- CHABA. 1981. Assessment of Community Response To High-Energy Impulse Sounds. National Research Council Committee on Hearing, Bioacoustics, and Biomechanics, WG 84.
- Chesser, R.K., M.J. Harvey, and R.S. Caldwell. 1975. Effects of Noise on Feral Populations of *Mus musculus*. *Physiological Zoology* 48:323-325.

- Clark, William H. 1979. Water Quality Status Report Bruneau River Owyhee County, Idaho. Division of Environment, Idaho Department of Health and Welfare. Water Quality Series No.36.
- Clemmer, R.O. and O.C. Stewart. 1986. Treaties, Reservations, and Claims. In Handbook of North American Indians, vol. 11, Great Basin. Washington, D.C.: Smithsonian Institution.
- Coggins, V.L. and P.E. Matthews. 1992. Lamb Survival and Herd Status of the Lostine Bighorn Herd Following a *Pasteurella* Die-off. Biennial Symposium. Northern Wild Sheep and Goat Council.
- Committee of the Health Council of the Netherlands (CHCN). 1996. "Effects of Noise on Health: Chapter 3 of a Report on Noise and Health prepared by a Committee of the Health Council of the Netherlands," Noise/News International, 4, September 1996.
- Conley, Cort. 1982. Idaho for the Curious: A Guide. Backeddy Books. Cambridge, Idaho.
- Cooperrider, A.Y., R.J. Boyd and H.R. Stuart, eds. 1986. Inventory and Monitoring of Wildlife Habitat. U.S. Department of the Interior, Bureau of Land Management. Denver, Colorado.
- Cowan, I.M. 1940. Distribution and Variation in the Native Sheep of North America. Am. Midl. Nat. 24:505-580.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deep Water Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. FWS/OBS-79/31.
- Crenshaw, J.G. 1991. Pronghorn Antelope Management Plan 1991-1995. Idaho Department of Fish and Game, Boise, Idaho. May.
- Crockett, J.K. 1995. Idaho Statewide Ground Water Quality Monitoring Program - Summary of Results, 1991 through 1993. Idaho Department of Water Resources. Water Information Bulletin No. 50, Part 2.
- Crowe, D.M. 1986. Furbearers of Wyoming. Wyoming Game and Fish Department. 74 pp.
- Dalton, V.M. and D.C. Dalton. 1993. Assessment of the Impacts of Low Level Military Aircraft on *Leptonycteris curasoae*, an Endangered Bat, at Organ Pipe Cactus National Monument, Arizona. Final Technical Report. Prepared for Organ Pipe Cactus National Monument, Rt. 1, Box 100, Ajo, AZ 85321; and 58th Civil Engineering Sq., Bldg 343, Luke AFB, AZ 85309.
- D'arms, E. and D.R. Griffin. 1972. Balloonists' Reports of Sounds Audible to Migrating Birds. Auk. 89:269-279.
- Daubenmire, R. 1974. Plants and Environment. John Wiley and Sons, Inc., New York, New York. 422 pp.
- Davis, W.B. 1939. The Recent Mammals of Idaho. Caldwell, Idaho: Caxton Printers.
- Department of Defense Instruction (DoDI) 6055.1. 1995. Exposure to Radio Frequency Energy.

- Diller, L. and R. Wallace. 1981. Additional Distribution Records and Abundance of Three Species of Snakes in Southwestern Idaho. *Great Basin Nat.* 41:154-157.
- Diller, L.V. and D.R. Johnson. 1982. Ecology of Reptiles in the Snake River Birds of Prey Area. U.S.D.I. Bureau of Land Management. Boise, Idaho.
- Doering, R.W. and B.L. Keller. A Survey of Bat Species of the Bruneau-Jarbridge River Area of Southwestern Idaho with Special Reference to the Occurrence of the Spotted Bat (*Euderma maculatum*). Bureau of Land Management Technical Bulletin. BLM, Boise District, Boise, Idaho. (in preparation).
- Doyle, F.I. and J.M.N. Smith. 1994. Population Responses of Northern Goshawks to the 10-year Cycle in Numbers of Snowshoe Hares. *Studies in Avian Biology* 16:122-129.
- Drever, James I. 1988. The Geochemistry of Natural Waters. Second edition. Prentice Hall, New Jersey.
- Duck Valley Planning Commission, Shoshone-Paiute Tribes, and Environmental Concern. 1972. *General Plan, Duck Valley Indian Reservation, Owyhee, Nevada, Shoshone and Paiute Tribes*. HUD Project No. CPA-NV-09-39-1000. Tribal Office, Duck Valley Reservation, Owyhee, Nevada.
- Easterly, T., A. Wood, and T. Litchfield. 1992. Responses of Pronghorn and Mule Deer to Petroleum Development on Crucial Winter Range in the Rattlesnake Hills. Wyoming Game and Fish, Cheyenne.
- Edmonds, LD. 1979. Airport Noise and Teratogenesis. *Archives of Environmental Health*. July/August 1979.
- Ehrlich, R., D.S. Dobkin, and D. Wheye. 1988. *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. Simon and Schuster Inc., New York, NY.
- Eleventh Air Force. 1992. Environmental Assessment of the expansion and upgrade of military training routes, Alaska. Elmendorf Air Force Base, Alaska.
- Ellis, D.H. 1981. Responses of Raptorial Birds to Low-Level Military Jets and Sonic Booms. Results of the joint USAF-USFWS study. Springfield, Virginia: National Technical Information Service. NTIS ADA108-778.
- . 1985. The Effects of Military Jet Operations on Nesting Birds of Prey. In: Ilyichev, V.D. and V.M. Gavrilov, eds. *Acta XVIII Congressus Internationalis Ornithologici*. Moscow, August 16-24, 1982, Vol. II. Academy of Sciences of the USSR, Moscow.
- Ellis, D.H., C.H. Ellis, and D.P. Mindell. 1991. Raptor Responses to Low-Level Jet Aircraft and Sonic Booms. *Environment Pollution* 74:53-83.
- Farnsworth, R.K., E.S. Thompson, and E.E. Peck. 1982. *Evaporation Atlas for the Contiguous 48 United States*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration Technical Report NWS33.
- Federal Emergency Management Agency (FEMA). 1989. Owyhee County, Idaho. National Flood Insurance Program.

- Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August.
- Federal Interagency Committee on Urban Noise (FICUN). 1980. Guidelines for Considering Noise in Land Use Planning and Control. Washington, D.C.: NIIS PB83-184838. June.
- Festa-Bianchet, M. 1988. Seasonal Selection in Bighorn Sheep: Conflicts Between Forage Quality, Forage Quantity, and Predator Avoidance. *Oecologia* 75:580-586.
- Fidell, S., T. Schultz, and D.M. Green. 1988. A theoretical Interpretation of the Prevalence Rate of Noise-induced Annoyance in Residential Populations. *J. Acoust. Soc. Am.* 84(6). December.
- . 1991. Updating a Dosage-Effect Relationship for the Prevalence of Annoyance Due to General Transportation Noise. *J. Acoust. Soc. Am.* 89. January.
- Fields, J.M. and C.A. Powell. 1985. A Community Survey of Helicopter Noise Annoyance Conducted Under Controlled Noise Exposure Conditions. NASA TM-86400. March.
- Finegold, L.S., C.S. Harris, and H.E. von Gierke. 1994. Community Annoyance and Sleep Disturbance: Updated Criteria for Assessing the Impacts of General Transportation Noise on People. *Noise Control Engineering Journal*. 42(1). January-February 1994.
- Fleming, W.J., J.A. Dubovsky, and J.A. Collazo. 1996. An Assessment of the Effects of Aircraft Activities on Waterfowl at Piney Island, North Carolina. A Draft Final Report prepared for the U.S. Marine Corps Cherry Point Marine Air Station, Cherry Point, NC.
- Fowler, C.S. 1986 Subsistence. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 64-98. *Handbook of North American Indians*, vol. 11, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Francine, J.K., A.E. Bowles, and S. Yaeger. 1995. Sounds from low-altitude jet overflights in burrows of the Merriam's kangaroo rat, *Dipodomys merriami*, and the kit fox, *Vulpes macrotis*. Presented paper at the Inter-noise 95 conference, Newport Beach, California.
- Frampton, K., M. Lucas, and B. Cook. 1993. Modeling the Sonic Boom Noise Environment in Military Operating Areas.
- Fraser, J.D. and D.R. Luukkonen. 1986. The Loggerhead Shrike. In: R.L. DiSilvestro (ed.) *Audubon Wildlife Report*. R.R. Donnelly and Sons Co., National Audubon Society, New York, NY.
- Frerichs, R.R. et al. 1980. Los Angeles Airport Noise and Mortality: Faulty Analysis and Public Policy. *American Journal of Public Health*. April.
- Gawlik, D.E. and K.L. Bildstein. 1993. Seasonal Habitat Use and Abundance of Loggerhead Shrikes in South Carolina. *J. Wildl. Manage.* 57:352-357.
- Gehr, E., G. Johnson, J.D. Merritt, and S. Nelson. 1982. Southwestern Idaho Class I Cultural Resources Overview. Prepared for the BLM, YH-553-CTI-1095. Professional Analysts, Eugene, Oregon.
- Geist, V. 1971. *Mountain Sheep: A Study in Behavior and Evolution*. The University of Chicago Press, Chicago, IL.

- _____. 1980. Behavior. In *Big Game of North America: Ecology & Management*. J.L. Schmidt and D.L. Gilbert, eds. Washington, D.C.
- Geluso, K.N. 1975. Urine Concentrating Cycles in Insectivorous Bats in the Laboratory. *Journal of Comparative Physiology*. 96:305-319.
- Gerber, M.F., J.C. Munger, A. Ames, and J. Stewart. 1996. Reptiles and Amphibians in Deep Canyons: the Big Jacks and Little Jacks Creek Drainages of Owyhee County, Idaho (Draft report). Department of Biology, Boise State University, Boise, Idaho.
- Gerstung, E.R. 1988. Status, Life History, and Management of the Lahontan Cutthroat Trout. *Am. Fish. Soc. Symp.* 4:93-106.
- Gladwin, D.N. and A.M. McKechnie. 1993. Review of the Treatment of Predicted Impacts to Biological Resources as Stated in the Draft Environmental Impact Statement (November 1993) for the Proposed Idaho Training Range. Letter to SAIC.
- Goodson, N.J. 1980. Bighorn Sheep in North-central Colorado, Past, Present and Future. Biennial Symposium. Northern Wild Sheep and Goat Council.
- Green, Thomas J. 1982. House Form and Variability at Givens Hot Springs, Southwest Idaho. *Idaho Archaeologist* 6:33-42.
- Griffin, D.R. and C.D. Hopkins. 1974. Sounds Audible to Migrating Birds. *Animal Behavior*. 22:672-678.
- Griffin, D.R., J.J. McCune and A.D. Grinnell. 1963. The Resistance of Bats to Jamming. *J. Exp. Zool.* 152:229-250.
- Hall, R.E. 1981. *The Mammals of North America*. Vol. 1. 2nd edition. New York: John Wiley & Sons.
- Hamilton, K., S.A. Holl, and C.L. Douglas. 1982. An Evaluation of the Effects of Recreational Activity on Bighorn Sheep in the San Gabriel Mountains, California. *Desert Bighorn Counc. Trans.* 26:50-55.
- Harris. 1984. Airport Noise Compatibility Planning; Development and Submission of Airport Operator's Noise Exposure Map and Noise Compatibility Program; Final Rule and Request for Comments. 14 CFR Parts 11 and 150, Federal Register 49(244): 18 December.
- Heinemann, J.M. 1969. Effects of Sonic Booms on the Hatchability of Chicken Eggs and Other Studies of Aircraft-Generated Noise Effects on Animals. In: *Proceedings of the Symposium on Extra-auditory Effects on Audible Sound*. AAAS Annual Meeting, Boston, MA.
- Henson, P. and T.A. Grant. 1991. The Effects of Human Disturbance on Trumpeter Swan Breeding Behavior. *Wild. Soc. Bull.* 19:248-257.
- Hercules, Inc. 1989. Green Dot and Red Dot Smokeless Gunpowder. MSDS. Wilmington, Delaware. December.
- Hicks, L.L. and J.M. Elder. 1979. Human Disturbance of Sierra Nevada Bighorn Sheep. *Journal of Wildlife Management*. 43(4):909-914.

- Hironaka, M., M.A. Fosberg, and A.H. Winward. 1983. Sagebrush-Grass Habitat Types of Southern Idaho. University of Idaho, FWR. Bulletin Number 35.
- Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press: Seattle.
- Hoffmeister, D.F. 1986. Mammals of Arizona. University of Arizona Press. 602 pp.
- Holthuijzen, A.M.A. 1989. Behavior and Productivity of Nesting Prairie Falcons in Relation to Construction Activities at Swan Falls Dam. Final Report. Idaho Power Company. Boise, Idaho.
- Hoskinson, R.L. and J.R. Tester. 1980. Migration Behavior of Pronghorn in Southeastern Idaho. Journal of Wildlife Management 44(1):132-144.
- Howell, D. 1992. Noise Effect Assessment on *Leptonycteris curasoae* at Fort Huachuca, AZ. Draft to Environmental Assessment, Department of the Army, Fort Huachuca Garrison, Test and Experimentation Command.
- Hutchison, D.J. and L.R. Jones, eds. 1993. Emigrant Trails of Southern Idaho. Bureau of Land Management and Idaho State Historical Society, Boise.
- Idaho Air National Guard (IDANG). 1990. Environmental Assessment for Saddle Low Military Operations Area (MOA) 124th Tactical Reconnaissance Group (TRG). Edition 2.0.
- Idaho Department of Commerce. 1994. Community Profiles of Idaho: Homedale, Caldwell, and Nampa. Economic Development Division. Boise, ID.
- _____. 1995. Idaho Facts. Division of Economic Development. Boise, ID.
- Idaho Department of Education. 1996. 1994-1995 Idaho School Profiles. State Department of Public Instruction. Boise, ID.
- Idaho Department of Employment. 1996. Annual Employment in Idaho for 1985-1996. Research and Analysis Bureau. Boise.
- Idaho Department of Fish and Game (IDFG). 1990. Upland Game Management Plan 1991-1995. Boise, Idaho.
- _____. 1992. Database Information, Computer Printout Including Vertebrate Characterization (VCA). Conservation Data Center (ICDC). Idaho Department of Fish and Game.
- _____. 1995. Furbearers: Study III, Job 1. Boise, Idaho.
- _____. 1996a. Home Page World Wide Web. Element Tracking Database Subset. Idaho Department of Fish and Game, Boise, Idaho.
- _____. 1996b. Bighorn Sheep Job Progress Report. Project W-170-R-20. Boise, Idaho.
- _____. 1997. Idaho Sage Grouse Management Plan 1997. Boise, Idaho.
- Idaho Department of Lands. 1996. Crop and Grazing Land Lease System: Lease Land Inventory by Lese, Township, Range, Section. Boise, Idaho.

- Idaho Department of Water Resources (IDWR). 1996. Adjudication Listing of Water Rights.
- Idaho Native Plant Society (INPS). 1994. Results of the Ninth Annual Idaho Rare Plant Conference. February 9-10, 1994.
- Idaho Power. 1994. General Design Guidelines. Boise, ID.
- Idaho State Tax Commission. 1996. Total Sales for Lodging, Amusement and Recreational Services, and Museums and Galleries for FY 1993-1996. Boise, ID.
- International Biography on Noise (IBON). 1995. Beta Version 2.00. U.S. Air Force Noise and Sonic Boom Impact Technology Advanced Program Development Office. Ball Aerospace & Technologies Corporation, Fairborn, Ohio.
- Inter-Tribal Council of Nevada. 1976. Numa: A Northern Paiute History. Inter-Tribal Council of Nevada, Reno, Nevada.
- Jackson, J.A., B.J. Schardien, and T.H. McDaniel. 1977. Opportunistic Hunting of a Marsh Hawk on a Bombing Range. Raptor Research. 11:86.
- Jasikoff, T.M. 1982. Habitat Suitability Index Models: Ferruginous Hawk. U.S.D.I. Fish and Wildlife Service. FWS/OBS-82/10.10.
- Jehl, J.R., and C.F. Cooper, eds. 1980. Potential Effects of Space Shuttle Booms on the Biota and Geology of the California Channel Islands: Research Reports. Center for Marine Studies, San Diego State Univ., San Diego, CA Technical Report. 80-1.
- Jenks, M.D. and B. Bonnicksen. 1985. Periods of Basalt Volcanism in the South-central Snake River Plain, Idaho. Geological Society of America Abstracts, Vol. 17, No. 4.
- _____. 1989. Subaqueous Basalt Eruptions into Pliocene Lake Idaho. In: V.E. Chamberlain, R.M. Breckenridge, and B. Bonnicksen, eds. Guidebook to the Geology of Northern and Western Idaho and Surrounding Area. Idaho Geological Survey Bulletin 28. Moscow, ID.
- Jenks, M.D., B. Bonnicksen, and M.M. Godchaux. 1993. Geologic Maps of the Grand View-Bruneau Area, Owyhee County, Idaho. Idaho Geological Survey Technical Report 93-2. Moscow, ID.
- Jenks, M.D., B. Bonnicksen, and N. Hultquist. 1984. Neogene Basalt Shield Volcanoes in the Snake River Plain, Idaho. Geological Society of America Abstracts, Vol. 16, No. 6.
- Jenni, D.A., R.L. Redmond, and T.K. Bicak. 1982. Behavioral Ecology and Habitat Relationships of Long-billed Curlews in Western Idaho. U.S. Department of the Interior, Bureau of Land Management, Boise, ID.
- JML2 Consulting. 1987. Industry Report on the 1983-84 through 1986-87 Idaho Outfitting Seasons.
- Johnsgard, P.A. 1973. Grouse and Quails of North America. University of Nebraska Press, Lincoln, NE.
- _____. 1983. The Grouse of the World. University of Nebraska Press, Lincoln, NE.

- Jones, F.N. and J. Tausher. 1978. Residence Under and Airport Landing Pattern as a Factor in Teratism. Archives of Environmental Health. January/February.
- Kaltenecker, G.S., K.K. Bates, and M.J. Bechard. 1995. Monitoring of Fall Raptor Migration in Southwestern Idaho. U.S. Department of the Interior, Bureau of Land Management Technical Bulletin. No. 95-11, Boise, ID.
- Kappler, C.J. 1904-1941. Indian Affairs: Laws and Treaties. Vol. 1-5. U.S. Government Printing Office. Washington.
- Kauffman, D.F. and B. Bonnicksen. 1990. Geologic Map of the Little Jacks Creek, Big Jacks Creek, and Duncan Creek Wilderness Study Areas, Owyhee County, Idaho. U.S.G.S. Miscellaneous Field Studies Map MF-2142.
- Keller, B.L. 1992. The Status of Bat Populations at Selected Localities in Owyhee County, Idaho. Final Report. Prepared for Science Applications International Corporation, Boise, Idaho.
- Kilgore Corporation. 1990. Red Phosphorus. MSDS. Toone, Tennessee. April.
- King, M.M. and G.W. Workman. 1986. Response of Desert Bighorn Sheep to Human Harassment: Management Implications. Trans. 51st N.A. Wildlife and National Res. Conference. 51:74-85.
- King, R.A. 1996. Post-fledging Dispersal and Behavioral Ecology of Burrowing Owls in Southwestern Idaho. M.S. Thesis. Boise State University, Boise, ID.
- King, W. K., D.L. Carver, and D.M. Worley. 1988. Vibration Investigation of the Museum Building at White Sands National Monument, New Mexico. U.S. Department of the Interior, Geological Survey. Open-File Report 88-544.
- Klott, J. 1996. Sensitive Animals of the Jarbidge Resource Area, Idaho. U.S. Department of the Interior, Bureau of Land Management Technical Bulletin No. 96-10. Boise, ID.
- Klott, J.H. and F.G. Lindzey. 1990. Brood Habitats of Sympatric Sage Grouse and Columbian Sharp-tailed Grouse in Wyoming. J. Wildl. Manage. 54:84-88.
- Knick, S.T. and J. T. Rotenberry. 1995. Landscape Characteristics of Fragmented Shrubsteppe Habitats and Breeding Passerine Birds. Cons. Biol. 9:1059-1071.
- Krausman, P.R., B.D. Leopold, and D.L. Scarbrough. 1986. Desert Mule Deer Response to Wildlife. Wildl. Soc. Bull. 14:68-70.
- Kryter, K.D. 1984. Physiological, Psychological, and Social Effects of Noise. NASA Reference Publication 1115. July.
- Lamp, R.E. 1989. Monitoring the Effects of Military Air Operations at the Fallon Naval Air Station on the Biota of Nevada. Nevada Department of Wildlife.
- Larrison, E.J. 1967. Guide to Idaho Mammals. Journal of the Idaho Academy of Science. Vol. 7. Idaho Academy of Science.

- Lawrence, V.A., D. H. McIntyre, H.D. King, D.M. Kulik, P.R. Moyle, A.R. Buehler, B. Bonnichsen, M.D. Jenks, and J. Bernt. 1988. Mineral Resources of the Bruneau River, Jarbidge River, and Sheep Creek West Wilderness Study Areas, Owyhee County, Idaho. U.S. Geological Survey Bulletin 1720-B.
- Lehman, R.N., K Steenhof, M.N. Kochert, and L.B. Carpenter. 1993. Raptor Abundance and Reproductive Success in the Snake River Birds of Prey Area. Pp. 12-39 in: Snake River Birds of Prey National Conservation Area Research and Monitoring Annual Report 1993. K Steenhof, ed. U.S.D.I., BLM, Boise, Idaho.
- Leibsch, E.J. 1992. Multiple-Aircraft Instantaneous Line Source (MAILS) Dispersion Model. Oak Ridge National Laboratory, Air Force Engineering & Services Center, ESL-TR-89-59. Tyndall Air Force Base. March.
- Leslie, M., G.K. Meffe, J.L. Hardesty, and D.L. Adams. 1996. Conserving Biodiversity on Military Lands: a Handbook for Natural Resources Managers. The Nature Conservancy, Arlington, VA.
- Lightfoot, K., and J.E. Francis. 1978. The Effect of Casual Surface Collecting on Behavioral Interpretations of Archaeological Data. In *An Analytical Approach to Cultural Research Management*. F. Plog, ed. Arizona State University Anthropological Papers. 13:83-91.
- Liljeblad, S. 1957. Indian Peoples of Idaho. Idaho Museum of Natural History, Pocatello.
- Loft, E.R., J.W. Menke, and J.G. Kie. 1991. Habitat Shifts by Mule Deer: The Influence of Cattle Grazing. *J. Wildl. Manage.* 55:16-26.
- Lucas, M.J. and P.T. Calamia. 1996. Military Operations Area and Range Noise Model: NRNMAP User's Manual. Final, Wright-Patterson AFB, OH: AAMRL. AL/OE-MN-1996-0001.
- Lucas, M. and K. Plotkin. 1988. ROUTEMAP Model for Predicting Noise Exposure From Aircraft Operations on Military Training Routes. Final. Wright-Patterson AFB, OH: AAMRL. AAMRL-TR-88-060.
- Lynch, T.E., and D.W. Speake. 1978. Eastern Wild Turkey Behavioral Responses Induced by Sonic Boom. In: Fletcher, J.L. and R.G. Busnel, eds. *Effects of Noise on Wildlife*. Academic Press, New York.
- Lyneis, M., D. Weide, and E. Warren. 1980. Impacts: Damage to Cultural Resources in the California Desert. Manuscript on file at the Department of Anthropology, University of Nevada, Las Vegas.
- MacArthur, R.A., V. Geist, and R.H. Johnston. 1982. Cardiac and Behavioral Responses of Mountain Sheep to Human Disturbance. *Journal of Wilderness Management*. 46(2):351-368.
- Manci, K.M., D.N. Gladwin, R. Villella, and M.G. Cavendish. 1988. Effects of Aircraft Noise and Sonic Booms on Domestic Animals and Wildlife: A Literature Synthesis. U.S. Fish and Wildlife Service, National Ecology Research Center, Fort Collins, Colorado. NERC - 88/29.
- Manning, R.W., and J. Knox Jones, Jr. 1989. *Myotis evotis*. Species Account by The American Society of Mammalogists. No. 329.

- Marks, J.S. and V.S. Marks. 1988. Winter Habitat Use by Columbian Sharp-tailed Grouse in Western Idaho. *J. Wildl. Manage.* 52:743-746.
- Marti, C.D. and J.S. Marks. 1989. Medium-sized Owls. In: B.G. Pendleton, ed. *Proceedings of the Western Raptor Management Symposium and Workshop, 1989*. National Wildlife Federation. Washington, D.C.
- Marzluff, J.M., L.S. Schueck, M. Vekasy, B.A. Kimsey, M. McFadzen, R.R. Townsend, and J.O. McKinley. 1994. Influence of Military Training on the Behavior of Raptors in the Snake River Birds of Prey Area. In: *Snake River Birds of Prey Area 1994 Annu. Rep.* K. Steenhof, ed. Pp. 41-112. U.S.D.I., BLM, Boise, Idaho.
- McCarty, J.K. and P.H.S. Jen. 1983. Bats *Eptesicus Fuscus* Reject Clutter Interference for Moving Targets More Successfully than for Stationary Ones. *Journal of Comparative Physiology.* 152(4):447-454.
- McDonald, M. 1996. Amphibian Inventory of the Jarbidge and Snake River Resource Areas. U.S.D.I., BLM, Idaho Technical Bulletin No. 96-13, Boise, Idaho.
- McInnis, M.L., and M. Vavra. 1987. Dietary Relationships among Feral Horses, Cattle and Pronghorn in Southeast Oregon. *J. Range Manage.* 40:60-66.
- McIntyre, D.H., H.D. King, D.M. Kulik, D.L. Sawatzky, R.A. Winters, A.M. Leszykowski, D. F. Kauffman, and B. Bonnichsen. 1988. Mineral Resources of the Little Jacks Creek, Big Jacks Creek, and Duncan Creek Wilderness Study Areas, Owyhee County, Idaho. U.S. Geological Survey Bulletin 1720-A.
- Merritt, F.S. 1983. *Standard Handbook for Civil Engineers*. Third edition. McGraw-Hill, Inc.
- Miller, G. and E.L. Smith. 1985. Human Activity in Desert Bighorn Habitat: What Disturbs Sheep? *Transactions of the Desert Bighorn Council*.
- Moore, G. and D. McClaran. 1989. *Idaho Whitewater: The Complete River Guide*. McCall, Idaho: Class VI Whitewater.
- Moseley, R.K. 1994. Report on the Conservation Status of *Lepidium Papilliferum*. Conservation Data Center. Idaho Department of Fish and Game. Boise, Idaho.
- Moulton, C.L. 1992. Air Force Procedure for Predicting Noise Around Airbases: Noise Exposure Model (NOISEMAP) Technical Report. AL-TR-1992-059.
- Mountain Home Air Force Base (AFB). 1995a. Environmental Baseline Survey 366 RANS Emitter Sites. January.
- _____. 1995b. 1993 Air Emission Inventory Report Title V Operating Permit Program. February. Mountain Home AFB, ID.
- _____. 1995c. Instruction 13-287. 1995 Saylor Creek Air Force Range.
- _____. 1996a. Enhanced Training in Idaho. Description of Proposed Action and Alternatives. February 1996.
- _____. 1996b. Environmental Assessment for the Relocation of the 726th Air Control Squadron to Mountain Home AFB. Mountain Home AFB, Idaho.

- _____. 1996c. Support Agreement Between 366th Wing, Mountain Home AFB, Idaho, and USDOJ Lower Snake River Ecosystem Boise District Office.
- Munger, J.C., S. Small, M. Olson, P. Bartelt, and C. Peterson. 1993. A Preliminary Survey of the Herpetofauna of Bruneau Resource Area, Boise District. U.S.D.I. Bureau of Land Management Technical Bulletin No. 93-2. BLM, Boise, Idaho.
- Munger, J.C., L. Herberger, D. Logan, W. Peterson, L. Mealy and M. Cauglin. 1994. A Survey of the Herpetofauna of Bruneau Resource Area, Boise District with Focus on the Spotted Frog, *Rana pretiosa*. U.S.D.I. Bureau of Land Management Technical Bulletin No. 94-7. BLM, Boise, Idaho. 63 pp.
- Murphy, R.F. and Y. Murphy. 1960. Shoshone-Bannock Subsistence and Society. Anthropological Records Vol. 16, No. 7. University of California Publications.
- National Climatic Data Center (NCDC). 1996. World Wide Web Site <www.ncdc.noaa.gov>.
- National Geographic Society. 1987. Field Guide to the Birds of North America, 2nd edition, National Geographic Society, Washington, D.C.
- National Guard Bureau (NGB). 1990. Environmental Effects of ANG Chaff Training Activities. Prepared by Science and Engineering Associates, Inc.
- _____. 1996a. Environmental Assessment for the Conversion of the 124th Wing. Idaho National Guard. Gowen Field, Idaho.
- _____. 1996b. Environmental Assessment for the Proposed Military Training Route Modification for the 124th Wing. Idaho National Guard. Gowen Field, Idaho.
- National Park Service (NPS). 1994. Report to Congress on Effects of Aircraft Overflights of the National Park System. Prepared pursuant to Public Law 100-91.
- National Research Council, National Academy of Sciences (NRC NAS). 1977. Guidelines for Preparing Environmental Impact Statements on Noise.
- National Wetland Inventory (NWI). 1989. Maps prepared by the USFWS National Wetland Inventory.
- _____. 1992. Maps prepared by the USFWS National Wetland Inventory.
- Natural Heritage Advisory Council to the State Land Board. 1988. Oregon Natural Heritage Plan. Salem, OR. In: U.S. Air Force 1996. Environmental Assessment for the Proposed Relocation of the 34th Bomb Squadron to Mountain Home Air Force Base, Idaho.
- Nelson, J.R. 1986. Rare plant surveys: Technique for impact assessment. In Conservation and Management of Rare and Endangered Plants. Edited by Thomas S. Elias. California Native Plant Society, Sacramento, California.
- Nevada Department of Labor. 1996. Annual Average Unemployment Rates for Nevada Counties (1986-1996). Carson City.
- Nevada Historic Preservation Office. n.d. Humboldt County Historic Marker Program. Department of Museums, Library, and Arts. Carson City, Nevada.

- Nickens, P.R., Larralde, S.L., and Tucker, G.C., Jr. 1981. A Survey of Vandalism to Archaeological Resources in Southwestern Colorado. Cultural Resources Series No. 11. Bureau of Land Management, Denver.
- North Atlantic Treaty Organization (NATO). Effects of Topography on Propagation of Noise in the Vicinity of Airfields. Final Report of the NATO/CCMS. Working Group Study Number 200. June.
- Northern Wild Sheep and Goat Council (NWSGC). 1985. Wild Sheep: Distribution, Abundance, Management and Conservation of the Sheep of the World and Closely Related Mountain Ungulates. M. Hoefs, ed. Northern Wild Sheep and Goat Council. Whitehorse, Yukon, Canada.
- Nussbaum, R.A., E.D. Brodie, Jr., R.M. Storm. 1983. Amphibians and Reptiles of the Pacific Northwest. Moscow, Idaho: University of Idaho Press.
- Occupational Safety and Health Administration (OSHA). Occupational Noise Exposure Standard. Code of Federal Regulations, title 29, part 1910, sec. 1910.95 (29 CFR 1910.95). Federal Register vol. 48. 28 June 1983, p. 29687-29698.
- O'Farrel, M.J. and E.H. Studier. 1980. *Myotis thysanodes*. Mammalian Species. 137:1-5.
- Olendorff, R. R. 1993. Status, Biology, and Management of Ferruginous Hawks: A Review. Raptor Research and Technical Assistance Center, Special Report. U.S. Department of the Interior, Bureau of Land Management, Boise, ID.
- Olson, W.E. 1989. Malheur County Sensitive Wildlife Habitat Areas Map. Oregon Department of Fish and Wildlife. May.
- Onderka, D.K. and W.D. Wishart. 1984. A Major Die-off From Pneumonia in Southern Alberta. Annual Symposium of the Northern Wild Sheep and Goat Council.
- Owyhee County. 1990. Owyhee County Comprehensive Plan Update.
- _____. 1991. Owyhee County Interim Land Use Policy Plan.
- _____. 1996. Owyhee County, Idaho: Report on Audited General Purpose Financial Statements and Additional Information, Year Ended September 30, 1995. Prepared by Bailey & Company Chtd. Nampa, ID.
- Padgett, W.G., A.H. Windward and A.P. Youngblood. 1987. Classification of Riparian Communities in the Intermountain Region. Proceedings of the Society of Wetland Scientist Eighth Annual Meeting. May 26-29, 1987. Seattle, Washington.
- Parlman, D.J. 1983. Groundwater Quality in the Western Snake River Basin, Swan Falls to Glens Ferry, Idaho. U.S. Geological Survey, Water-Resources Investigations Report 83-4062. Prepared in cooperation with the Idaho Department of Water Resources. Boise, Idaho.
- Pearsons K.S., D.S. Barber, et al. 1989. Analyses of the Predictability of Noise-Induces Sleep Disturbance. USAF Report HSD-TR-89-029. October.
- Peter, K. 1988. Archaeological Reconnaissance of the Exclusive Use Area within the Saylor Creek Range, Idaho. Prepared for the U.S. Air Force.

- _____. 1989. Archaeological Reconnaissance Survey of Superior Valley Range, China Lake Naval Weapons Center and Leach Lake Range, Fort Irwin Reservation, California. In Final Environmental Assessment, SAC Low-Altitude Flight Operations at the Superior Valley and Leach Lake Ranges, California. U.S. Air Force, Strategic Air Command. June.
- Pickford, G.D. 1932. The Influence of Continued Heavy Grazing and or Promiscuous Burning on Spring-Fall Ranges in Utah. *Ecology* 13:159-171.
- Plotkin, K.J., V.R. Desai, M.J. Lucas, C.L. Moulton, and R.G. Garza. 1990. Sonic Boom Environment Under A Supersonic Military Operating Area. AIAA 13th Aeroacoustics Conference. AIAA-90-4032.
- Plotkin, K.J., K.A. Bradley, J.A. Molino, and D.S. Fischer. 1991. The Effect of Onset Rate on Aircraft Noise Annoyance. Volume 1: Laboratory Experiments. Wyle Laboratories Research Report WR 91-19. November.
- Plotkin, K.J., et al. 1992. *Journal of Aircraft*, Volume 29, Number 6. Nov/Dec '92, pages 1069-1072. "Sonic Boom Environment under a Super Sonic Military Operation Area."
- Plotkin, K.J., C.L. Moulton, and R.A. Lee. 1993. Incorporation of Topography Effects in Aircraft Noise Modeling. NOISE-CON 93 Proceedings, pp. 595-600, May.
- Prescott, D.R.C. and D.M. Collister. 1993. Characteristics of Occupied and Unoccupied Loggerhead Shrike Territories in Southeastern Alberta. *J. Wildl. Manage.* 57:346-352.
- Public Law 101-195. Nevada Wilderness Protection Act of 1989.
- Public Law 101-628. Arizona Desert Wilderness Act of 1990.
- Reed, P.B. Jr. 1988. National List of Plant Species That Occur in Wetlands: Northwest (Region 9). U.S. Department of the Interior, Fish and Wildlife Service. Biological Report 88 (26.9).
- Reid, J.J. 1979. To Soothe the Salvage Beast. 1978 Proceedings, The American Society for Conservation Archaeology Newsletter. Vol. 5.
- Rich, T. 1986. Habitat and Nest-site Selection by Burrowing Owls in the Sagebrush Steppe of Idaho. *J. Wildl. Manage.* 50:548-555.
- Riggs, H.C. and W.A. Harenberg. 1976. Flood Characteristics of Streams in Owyhee County, Idaho. U.S. Geological Survey. Water Resources Investigations 76-88.
- Robinson, W.L., and E.G. Bolen. 1984. Wildlife Ecology and Management. MacMillan Publishing Company, New York, New York. 478 pp.
- Rusco, E.R. and M.K. Rusco. 1986. Tribal Politics. In Handbook of North American Indians, Volume II Great Basin. W.D. Azevedo, ed. Smithsonian Institution. Washington, D.C.
- Ryder, T.J., and L.L. Irwin. 1987. Winter Habitat Relationships of Pronghorns in Southcentral Wyoming. *J. Wildl. Manage.* 51:79-85.

- Ryder, T.J., E. S. Williams, K.V. Mills, K.H. Bowles, and E.T. Thorne. 1992. Effect of Pneumonia on Population Size and Lamb Recruitment in Whiskey Mountain Bighorn Sheep. Bienn. Symp. North. Wild Sheep and Goat Council. 8:136-146.
- Saab, V. and C. Groves, 1992. Idaho's Migratory Landbirds - Description, Habits and Conservation. Nongame Wildlife Leaflet #10. IDFG, USFS, BLM, USFWS, National Fish and Wildlife Foundation.
- Sax, N.I. and R.J. Lewis. 1987. Hazardous Chemicals Desk Reference. Van Nostrand Reinhold Company, New York.
- Schmidt, U. and G. Joermann. 1987. The Influence of Acoustical Interference on Echolocation in Bats. *Mammalia*. 50(3):379-390.
- Schultz, Richard H., Jr. And Robert L. Pfaltzgraff, Jr. 1992. *The Future of Airpower in the Aftermath of the Gulf War*, International Security Studies Program, The Fletcher School of Law and Diplomacy, Tufts University, Air University Press. 374 pp.
- Schultz, T.J. 1978. Synthesis of Social Surveys on Noise Annoyance. *Journal of the Acoustical Society of America* 64. August.
- Schweinsburg, R.E. 1974. Disturbance Effects of Aircraft to Waterfowl on North Slope Lakes, June, 1972. In: Gunn, W.W. and J.A. Livingston, eds. *Arctic Gas Biological Report Series Vol. 14*. Pp. 1-48.
- Scott, D.D. 1980. Pothunting in Southwestern Colorado. *Colorado Council of Professional Archaeologists Newsletter*. 2(1):3.
- Simmons, J.A., W.A. Lavender and B.A. Lavender. 1974. Quantitative Effects of Noise on Sonar Performance in Bats. *J. of the Acoustical Society of America*. 56(S):S38-S38 (abstract only).
- Smathers, R.I., N.R. Rimbey, C.W. Gray, and C.C. Gibson. 1996. Cow-Calf Budgets for Hypothetical 500-cow Herd. University of Idaho Cooperative Extension Service. Owyhee County Extension Office, Idaho.
- Smith, G.R. 1975. Fishes of the Pliocene Glens Ferry Formation, Southwest Idaho. University of Michigan Museum of Paleontology Papers on Paleontology, Vol. 14. Ann Arbor, MI.
- Smith, G.R., K. Swirydczuk, P.G. Kimmel, and B.H. Wilkinson. 1982. Fish Biostratigraphy of Late Miocene to Pleistocene Sediments of the Western Snake River Plain, Idaho. In: *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26. Moscow, ID
- Smith, T.S., J.T. Flinders, and D.S. Winn. 1991. A Habitat Evaluation Procedure for Rocky Mountain Bighorn Sheep in the Intermountain West. *The Great Basin Naturalist*. 51:205-225.
- Snow, C. 1981. Ferruginous Hawk (*Buteo regalis*). Habitat Management Series for Unique or Endangered Species. U.S. Department of the Interior, BLM Report No. 13.
- Soil Conservation Service, U.S. Department of Agriculture. 1986. Soil Survey of Elmore County Area, Idaho, Parts of Elmore, Owyhee and Ada Counties. U.S. Government Printing Office, Washington, DC.

- _____. 1987. Hydric Soils of the United States. In cooperation with the National Technical committee for Hydric Soils. Washington, DC.
- Stadelman, W.J. 1958. The Effect of Sounds of Varying Intensity on Hatchability of Chicken Eggs. *Poultry Sci.* 37:166-169.
- Stebbins, R.C. 1985. *Western Reptiles and Amphibians*, 2nd ed. Houghton Mifflin Company Books, New York.
- Stelfox, J.G. 1971. Bighorn sheep in the Canadian Rockies: a History 1800-1970. *Can. Field-Nat.* 85: 101-122.
- Stemp, R.E. 1983. Heart Rate Responses of Bighorn Sheep to Environmental Factors and Harassment. Master's Thesis. University of Calgary, Alberta.
- Stephens, D.A. and S.H. Sturts. 1991. *Idaho Bird Distribution*. Published by Idaho Museum of Natural History, Pocatello and Nongame Endangered Wildlife Program, Idaho Department of Fish and Game, Boise. Special Publication No. 11. August.
- Stephenson, T.R., M.R. Vaughan, and D.E. Anderson. 1996. Mule Deer Movements in Response to Military Activity in Southeast Colorado. *J. Wildl. Manage.* 60:777-787
- Steward, J. 1938. Basin-Plateau Aboriginal Sociopolitical Groups. Smithsonian Institution Bureau of American Ethnology Bulletin 120. United States Government Printing Office, Washington 1938. Reprint 1970. Salt Lake City: University of Utah Press.
- _____. 1943. Culture Element Distributions: XIII, Northern and Gosiute Shoshoni. *Anthropological Records* 8(3):263-392.
- Stewart, O.C. 1941. Culture Element Distributions: XIV, Northern Paiute. *Anthropological Records* 4(3):361-446.
- Stockwell, C.A. and G.C. Bateman. 1991. Conflicts in National Parks: A Case Study of Helicopters and Bighorn Sheep Time Budgets at the Grand Canyon. *Biol Conserv* 56 (1991) 317-328.
- Straccia, F.G., B.H. Wilkinson, and G.R. Smith. 1990. Miocene Lacustrine Algal Reefs--Southwestern Snake River Plain, Idaho. *Sedimentary Geology*. Vol. 67.
- Stusnick, E., K.A. Bradley, J.A. Molino, and G. DeMiranda. 1992. The Effect of Onset Rate on Aircraft Noise Annoyance. Volume 2: Rented Own-Home Experiment. Wyle Laboratories Research Report WR 92-3®, March.
- Stusnick, E., K.A. Bradley, M.A. Bossi, and D.G. Rickert. 1993. The Effect of Onset Rate on Aircraft Noise Annoyance. Volume 3: Hybrid Own-Home Experiment. Wyle Laboratories Research Report WR 93-22, December.
- Sutherland, L. 1990. Assessment of Potential Structural Damage from Low Altitude Subsonic Aircraft. Wyle Laboratories Research Report WR 89-16, El Segundo, California.
- Taylor, D.M., C.H. Trost, and B. Jamison. 1989. The Biology of the White-faced Ibis in Idaho. *Western Birds.* 20:125-133.

- Taylor, E., W. Bodie, and M. McCoy. 1993. California Bighorn Sheep Ecology, Study II: Habitat Selection. Idaho Department of Fish and Game, Boise, Idaho.
- Terres, J.K. 1991. The Audubon Society Encyclopedia of North American Birds. Wings Books, New York.
- Thorne, E.T., G. Butler, T. Varcalli, K. Becker, and S. Hayden. 1979. The Status, Mortality and Response to Management of the Bighorn Sheep of Whiskey Mountain. Wildlife Technical Report No. 7. Res. Aid in Wildlife. Rest. Compl. Rept. Proj. No. FW-3-R-24, Job No. 15W. Wyoming Game and Fish Department, Cheyenne. In: Stemp 1983.
- Titmus, G.L. and J.C. Woods. 1990. West Clover Clovis. Idaho Archaeologist 13(1):15-17.
- . 1992. Fluted Points from the Snake River Plain. In Clovis: Origins and Adaptations, edited by R. Bonnichson and K.L. Turnmire, pp. 119-131. Peopling of the American Publications, edited volume series. Center for the Study of the First Americans, Oregon State University, Corvallis.
- Troest, N. and B. Mohl. 1986. The Detection of Phantom Targets in Noise by Serotine Bats. J. of Comparative Physiology (A). 159:559-568.
- Trost, C.H. 1989. White-faced Ibis. In: Rare, Sensitive, and Threatened Species of the Greater Yellowstone Ecosystem. T.W. Clark, A.H. Harvey, R.D. Dorn, D.L. Genter, and C. Groves. (eds.). Pp. 57-58. Northern Rockies Conservation Cooperative, Montana Natural Heritage Program, The Nature Conservancy, and Mountain West Environmental Service.
- Trost, C.H. and A. Gerstell. 1994. Status and Distribution of Colonial Nesting Waterbirds in Southern Idaho, 1993. U.S. Department of the Interior, Bureau of Land Management. Idaho Technical Bulletin No. 94-6. Boise, ID.
- U.S. Air Force (Air Force). 1990a. Tier One: Draft Environmental Impact Statement: Realignment of Mountain Home Air Force Base and Proposed Expanded Range Capability, Volume 1 and 2. Prepared for HQ TAC, Langley AFB, Virginia.
- . 1990b. Multiple Aircraft Instantaneous Line Source (MAILS) Dispersion Model. ESL-TR-89-59. United States Air Force Engineering and Services Laboratory. Air Force Engineering and Service Center. February. Tyndall AFB, FL.
- . 1992. Final Environmental Impact Statement: Proposals for the Air Force in Idaho. Volumes I and II. United States Air Force. January.
- . 1993a. Biological Resources Technical Support Document Idaho Training Range. Final.
- . 1993b. Biological Resources Technical Support Document Idaho Training Range Environmental Impact Analysis Process. November.
- . 1993c. Socioeconomic Technical Support Document Idaho Training Range Environmental Impact Analysis Process. November.
- . 1993d. Draft EIS ITR. November.

- _____. 1994-1997. Training documentation for the 366th Wing.
AFP 36-2211 Guide for Management of AF Training Systems, 1 Mar 97.
MCI 11-235 C/KC-135 Operations, 1 Jan 96.
ACCI 11-B-1B Aircrew Training--B-1, 10 May 96.
MCI 11-F16 Pilot Training--F-16, 1 Oct 94.
MCI 11-F15 Pilot Training--F-15, 1 Nov 94.
MCI 11-F15E Aircrew Training--F15E, 5 Mar 95
366 OGI 11-4 Composite Wing Training Policy Planning Execution, 6 May 97
- _____. 1995. Air Conformity Applicability Model, Version 1.1. User's Guide. January.
Brooks AFB, TX.
- _____. 1996a. Ecosystem Survey of Mountain Home Air Force Base, Saylor Creek Range, and
Associated Restricted Airspace R-3202A.
- _____. 1996b. Environmental Assessment for the Proposed Relocation of the 34th Bomb
Squadron to Mountain Home Air Force Base, Idaho. Final.
- _____. 1996c. Pronghorn Antelope Surveys on the Owyhee Uplands of Southwestern Idaho,
1993-1995. Final Report to Air Combat Command.
- _____. 1997. Final Report. Environmental Effects of Self Protection Chaff and Flares.
- U.S. Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation
Manual. Environmental Laboratory. Vicksburg, MS: U.S. Army Engineer Waterways
Experiment Station. Technical Report Y-87-1.
- _____. 1992. Off-road Vehicle Impacts to Archeological Sites. Archeological Sites Protection
and Preservation Notebook Technical Notes. U.S. Army Corps of Engineers Waterways
Experiment Station, Environmental Impact Research Program. Vicksburg, Mississippi.
- U.S. Bureau of Economic Analysis (BEA). 1996. Regional Economic Information System.
Tables C05, C25, and C30. U.S. Department of Commerce, Regional Economic
Measurement Division. Washington, DC.
- U.S. Bureau of the Census. 1990. 1990 Census of Population and Housing STF3A.
- _____. 1991a. 1990 Census of Population and Housing. Summary Population and Housing
Characteristics: Idaho. 1990 CPH-1-14. Economics and Statistics Administration, U.S.
Department of Commerce. Washington, DC.
- _____. 1991b. 1990 Census of Population. Social and Economic Characteristics: Idaho. 1990
CP-2-14. Economics and Statistics Administration, U.S. Department of Commerce.
Washington, DC.
- _____. 1993. 1990 Census of Population and Housing: Population and Housing Counts,
Nevada. Economics and Statistics Administration, U.S. Department of Commerce.
Washington, D.C.
- _____. 1994. 1992 Census of Agriculture. Volume 1: Geographic Area Series. Part 12: Idaho.
State and County Data. AC92-A-12. Economics and Statistics Administration, U.S.
Department of Commerce. Washington, DC.

- _____. 1996. State and County Population, 1990 and 1995: Idaho. Population Distribution and Population Estimates Branches. Washington, DC.
- U.S. Council of Economic Advisors. 1996. Annual Report together with Economic Report of the President. Appendix B, Tables B-3 and B-57. U.S. Government Printing Office. Washington, DC.
- U.S. Department of Commerce. 1992. Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II). Second Edition. Economics and Statistics Administration of
- U.S. Department of the Interior (DOI). 1990. National Wild and Scenic Rivers System. U.S. Department of Agriculture, Forest Service.
- U.S. Environmental Protection Agency (USEPA). 1972a. Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety. EPA-550/9-74-004. Washington, D.C.
- _____. 1972b. Mixing Heights, Wind Speeds, and Potential for Urban Air Pollution Throughout the Contiguous United States.
- _____. 1991. Drinking Water Regulations under the Safe Drinking Water Act, June 1991: Office of Groundwater and Drinking Water, Drinking Water Standards Division, Washington D.C.
- _____. 1995. Compilation of Air Pollutant Emissions Factor, AP-42. Vol. I and II Mobile Sources, Fifth Edition.
- _____. 1996. USA Air Quality Nonattainment Areas.
<http://WWW.EPA.GOV/DOCS/AIRS/AIRS.HTML>. October.
- U.S. Fish and Wildlife Service (USFWS). 1993. Federal Register. Volume 58. No. 14. 50 CFR Part 17. January 25, 1993. Pp. 5938-5946.
- _____. 1995. Federal Register. Volume 60. No. 133. 50 CFR Part 17. July 12, 1995. Pp. 36000-36009.
- _____. 1996. Letter dated June 4, 1996, from Susan Martin to Alton Chavis. Enclosure 1: Listed and Proposed Endangered and Threatened Species and Candidate Species, That May Occur within the Area of the Proposed Air Force Training Range in Eastern Owyhee County Idaho. FWS-1-4-96-SP-197. Enclosure 2: Federal Agencies Responsibilities under Section 7(a) and (c) of the Endangered Species Act.
- U.S. Forest Service (USFS). 1985. Humboldt National Forest Land and Resource Management Plan, Final Environmental Impact Statement. Elko, Nevada.
- _____. 1992. Overview, Report to Congress, Potential Impacts of Aircraft Overflights of National Forest System Wilderness. Report to Congress. Prepared pursuant to Section 5, Public Law 100-91, National Park Overflights Act of 1987. January.
- U.S. Geological Survey (USGS), Department of Interior. 1986. National Water Survey 1985 - Hydrologic Events and Surface Water Resources. Water-Supply Paper 2300.

- U.S. Statutes at Large. 1978. 95th Congress 2nd Session 1978, Vol. 92, part 1, pp. 1-1336, Public Laws. Public Law 95-341, American Indian Religious Freedom Act. August 11, 1978.
- Utley, R.M. 1988. Indian-United States Military Situation, 1848-1891. In Handbook of North American Indians Volume 4, History of Indian-White Relations. W.E. Washburn, ed. Smithsonian Institution, Washington, D.C.
- Utter, Jack. 1993. American Indians: Answers to Today's Questions. National Woodland Publishing.
- Von Gierke, H.R. 1990. The Noise-Induced Hearing Loss Problem. NIH Consensus Development Conference on Noise and Hearing Loss. Washington, D.C. January 22-24.
- Wakelyn, L.A. 1984. Analysis and Comparison of Existing and Historic Bighorn Sheep Ranges in Colorado. M.S. Thesis, Colorado State University, Fort Collins, CO.
- Walker, D.E., Jr. 1978. Indians of Idaho. University of Idaho Press, Moscow.
- Ward, D. and R. Stehn. 1989. Response of Brant and Other Geese to Aircraft Disturbances at Izembek Lagoon, Alaska. USFWS Alaska Fish and Wildlife Research Center, Anchorage.
- Warner, R.M. and M.J. Czapleski. 1984. *Myotis volans*. Species account by the American Society of Mammalogists. No. 224.
- Warren, C.N., M. Knack, and E. Warren. 1980. A Cultural Resource Overview for the Amargosa-Mojave Basin Planning Units. Riverside, California: BLM, Desert Planning Unit.
- Watson, C., E. Atkinson, and E. Clark. 1994. Raptor distribution and use of the Orchard Training Area (OTA) and adjacent areas, 1993-1994. In: Snake River Birds of Prey Area 1994 Annu. Rep. K. Steenhof, ed. Pp. 113-153. U.S.D.I., BLM, Boise, Idaho.
- Webster, D.B. and M. Webster. 1972. Adaptive Value of Hearing and Vision in Kangaroo Rat Predator Avoidance. *Brain, Behavior and Evolution*. 4:310-322 (abstract only).
- Weisenberger, M.E., P.R. Krausman, M.C. Wallace, D.W. De Young, and O. Eugene Maughan. 1996. Effects of Simulated Jet Aircraft Noise on Heart Rate and Behavior of Desert Ungulates. *J. Wild. Manage.* 60:52-61.
- Wesler, J.E. 1977. Concord Operations at Dulles International Airport. NOISE-EXPO 77. Chicago, IL. March.
- White, C.M. and T.L. Thurow. 1985. Reproduction of Ferruginous Hawks Exposed to Controlled Disturbance. *Condor* 85:14-122.
- Williams, L.R. 1978. Vandalism to Cultural Resources of the Rocky Mountain West. Cultural Resources Report No. 21. USDA Forest Service, Southwestern Region, Albuquerque, New Mexico.
- Wishart, W.D., J.T. Jorgenson, and M. Hilton. 1980. A Minor Die-off of Bighorns From Pneumonia in Southern Alberta (1978). *Proc. Bienn. Symp. North. Wild Sheep and Goat Counc.* 2:229-245.

- Woods, C.P. 1994. The Loggerhead Shrike in Southwest Idaho. M.S. Thesis. Boise State University, Boise, ID.
- Woods, C.P. and T.J. Cade. 1996. Nesting habits of the loggerhead shrike in sagebrush. *Condor*. 98:75-81.
- Workman, G.W. and Bunch, T.D. 1991a. Cardiac and Febrile Response of Bighorn Sheep (*Ovis Canadensis*) to Various Aircraft Disturbances. Conducted by Utah State University for the U.S. Air Force.
- . 1991b. Sonic Boom/ Animal Stress Project Report on Elk (*Cervis Canadensis*). Conducted by Utah State University for the U.S. Air Force.
- . 1991c. Sonic Boom/ Animal Stress Project Report on Pronghorn Antelope (*Antilocapra Americana*). Conducted by Utah State University for the U.S. Air Force.
- Workman, G.W., T.D. Bunch, J.W. Call, R.C. Evans, L.S. Neilson, and E.M. Rawlings. 1992a. Sonic boom and other disturbance impacts on pronghorn antelope (*Antilocapra americana*). In: Sonic Boom/ Animal Distribution Studies on Pronghorn Antelope, Rocky Mountain Elk and Bighorn Sheep. Utah State University. 67 pp.
- . 1992b. Sonic boom and other disturbance impacts on Rocky Mountain Elk (*Cervic canadensis*). In: Sonic Boom/ Animal Distribution Studies on Pronghorn Antelope, Rocky Mountain Elk and Bighorn Sheep. Utah State University, 83 pp.
- Worldwide Bird Aircraft Strike Hazard (BASH) Conference. 1990. Worldwide Bird Aircraft Strike Hazard Conference Report. April 10-12, Little Rock, Arkansas.
- Wright, H., L. Neuenschwander, L. and C. Britton. 1979. The Role and Use of Fire in Sagebrush-Grass and Pinyon-Juniper Plant Communities. USDA Forest Service General Technical Report INT-58. September.
- Wright, H.A. and A.W. Bailey. 1982. Fire Ecology United States and Southern Canada. New York: John Wiley and Sons.
- Wyatt, Margaret. 1987. Cultural Resources Inventory of the Riddle State Land Exchange. BLM, Boise District. Boise, Idaho.
- Yensen, D. 1980. A Grazing History of Southwestern Idaho with Emphasis on the Birds of Prey Study Area. U.S.D.I. Bureau of Land Management. Boise, Idaho.
- Young, Jack. 1984. Class II Cultural Resource Inventory of the Owyhee, Bruneau and Jarbidge Resource Areas, Boise District, BLM. Prepared for the BLM Boise District.
- Younk, J.V. and M.J. Bechard. 1994. Breeding Ecology of the Northern Goshawk in High-elevation Aspen Forest of Northern Nevada. *Studies in Avian Biology* 16:119-121.
- Zeveloff, S.I. 1988. Mammals of the Intermountain West. Salt Lake City: University of Utah Press.
- Zilka, N.T. 1973. Mineral Resources of the Bruneau River Drainage, Idaho. U.S. Bureau of Mines. On file at Western Field Operations Center, Spokane, WA.

Zoellick, B.W., R. Armstrong, and J. Klott. 1996. Status of the Migratory Bull Trout Population in the Jarbidge River Drainage. U.S.D.I., BLM, Idaho Technical Bulletin. No. 96-5, Boise, Idaho.

8.0 PERSONS AND AGENCIES CONTACTED

8.0 PERSONS AND AGENCIES CONTACTED

- Alexander, Lois. Biologist. Oregon State University, Corvallis, Oregon. 1997.
- Bammann, Al. Biologist. Bureau of Land Management, Vale District Office, Oregon. 1996.
- Barker, Pat. State Archaeologist, Bureau of Land Management, Reno, Nevada.
- Bates, Kirk. Wildlife Biologist. Raptor Research Technical Assistance Center, Boise, Idaho. 1996.
- Beck, Jon. Graduate Student, Department of Biological Sciences, Idaho State University, Pocatello, Idaho. 1997.
- Biar, John. Range Conservationist. Bureau of Land Management, Jarbidge District Office, Twin Falls, Idaho. 1996.
- Bodie, Walt. Biologist. Idaho Department of Fish and Game, Nampa, Idaho. 1992.
- Brown, Maggie. Records Manager. Nevada State Museum, Carson City, Nevada.
- Cannings, Syd. Zoologist, British Columbia National Heritage Program. 1993.
- Carpenter, Leslie. Wildlife Biologist. Raptor Research Technical Assistance Center, Boise, Idaho. 1996.
- Clark, Beth. Elko District Bureau of Land Management, Elko, Nevada.
- Clark, Jim. Biologist. Bureau of Land Management, Lower Snake River District Office, Idaho. 1996.
- Cobb, Vincent. Graduate Student. Department of Biological Sciences, Idaho State University, Pocatello, Idaho. 1997.
- Cook, Lon. Idaho Department of Fish and Game. 1997.
- Costello, Terry. Chief, Planning and Environmental Assistance. Bureau of Land Management, Lower Snake River District Office, Idaho.
- Crutcher, Wilson. Chair. Fort McDermitt Tribal Council, Fort McDermitt Reservation, McDermitt, Nevada.
- DeBolt, Ann. Botanist. Bureau of Land Management, Lower Snake River District Office, Idaho. 1996.
- Demboski, John. Biologist. University of Alaska Museum, Fairbanks, Alaska. 1996.
- Doremus, John. Biologist, Bureau of Land Management, Boise, Idaho. 1996.
- Duck Valley Reservation. 1996. Letter (#97.018) from James Paiva, Tribal Chairman, to Colonel Billy F. Richey, Director of Staff (Mountain Home Air Force Base), dated 22 October 1996. Owyhee, Nevada.

- Dutcher, Don. Water Rights Analyst. Bureau of Land Management, Idaho State Office, Boise, Idaho. 1996.
- Elko County Manager's Office. Elko, Nevada. 1996.
- Fenzel, Todd. Assistant Refuge Manager. United States Fish and Wildlife Service, Deer Flat National Wildlife Refuge. 1996.
- Fidel, Dr. Sandy. BBN Technologies, San Diego, California.
- Foresman, Kerry. Professor of Biological Sciences. University of Montana, Missoula, Montana. 1996.
- Foster, Jon. Ecosystem Management Specialist. Bureau of Land Management, Idaho State Office, Boise, Idaho. 1996.
- Frampton, Fred. Humboldt National Forest, Elko, Nevada
- Frischle, Carter. Water Rights Supervisor. Idaho Department of Water Resources, Boise, Idaho. 1996.
- Gilsen, Dr. Leland. State Parks and Recreation Division, Historic Preservation Office, Salem, Oregon.
- Gray, Ken. Wildlife Biologist. Nevada Division of Wildlife, Carson City, Nevada. 1996.
- Haak, Bruce. Nongame Biologist. Idaho Department of Fish and Game, Nampa, Idaho. 1996.
- Hattori, Eugene. State Archaeologist. State Historic Preservation Office, Carson City, Nevada.
- Hearst, Dr. Jonena. Paleontologist. University of Kansas-Lawrence, Lawrence, Kansas.
- Howard, Ted. Tribal Archaeologist. Shoshone-Paiute Tribes, Duck Valley Reservation, Owyhee, Nevada.
- Heft, Ralph. Area Manager. Bureau of Land Management, Vale District Office, Oregon.
- Huggard, Dave. Wildlife Habitat Ecologist. Ministry of Forests, Kamloops Region, British Columbia, Canada. 1996.
- Hutchison, Dan. Archaeologist. Bureau of Land Management, Idaho State Office, Boise, Idaho. 1996.
- Idaho Department of Fish and Game. 1996. Facsimile from Gina Glahn, Bureau of Administration, detailing permit costs and estimated numbers of hunters in Owyhee County. Boise, Idaho.
- Ivy, Gary. Biologist. United States Fish and Wildlife Service, Malheur National Wildlife Refuge, Oregon. 1996.
- James, Ron. SHPO, Supervisor. Division of Historic Preservation and Archaeology, Carson City, Nevada 89710.

Enhanced Training in Idaho Final EIS

- Jenks, Frank. Outdoor Recreation Specialist. Bureau of Land Management, Jarbidge Resource Area, Twin Falls, Idaho. 1996.
- Josie, Abbie. Range Conservationist. Bureau of Land Management, Lower Snake River District Office, Idaho.
- Klott, Jim. Biologist. Bureau of Land Management, Twin Falls, Idaho. 1996, 1997.
- Lievsay, Larry. Realty Specialist. Bureau of Land Management, Idaho State Office, Boise, Idaho. 1996.
- Lowery, Tim. Botanist. University of New Mexico, Albuquerque, New Mexico.
- Madenford, Gary. Water Rights Team Leader. Bureau of Land Management, Idaho State Office, Boise, Idaho. 1996.
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- Munger, Jim. Associate Professor of Biology. Boise State University, Boise, Idaho. 1997.
- Murphy, Tim. Elko District Bureau of Land Management, Elko, Nevada
- Neitzel, Suzi. Cultural Resource Compliance Officer. State Historic Preservation Office, Boise, Idaho. 1997.
- Nelson, Lou. Wildlife Manager, Region 3. Idaho Department of Fish and Game, Nampa, Idaho. 1992, 1993, 1996.
- Orcutt, Dick. Regional Habitat Biologist. Idaho Department of Fish and Game, Mountain Home, Idaho. 1996.
- Owyhee County Sheriff's Office, Murphy, Idaho. 1996.
- Paiva, James. Chairman. Shoshone-Paiute Tribes, Duck Valley Reservation, Owyhee, Nevada.
- Parrish, Dave. Environmental Staff Biologist. Idaho Department of Fish and Game, Jerome, Idaho. 1996.
- Patterson, Beau. District Wildlife Biologist. Wyoming Game and Fish Department, Casper, Wyoming. 1995.
- Peugh, Butch (retired). Bureau of Land Management, Idaho State Office, Boise, Idaho.
- Pinto, Cynthia. Native American Consultant. Bureau of Land Management, State Office, Reno, Nevada.

- Ross, Jeff. Archaeologist and Outdoor Recreation Planner. Bureau of Land Management, Jarbidge Resource Area, Lower Snake River.
- Schueck, Linda. Wildlife Biologist. Raptor Research Technical Assistance Center, Boise, Idaho. 1996.
- Seibert, Greg. Public Affairs. Idaho Department of Commerce, Boise, Idaho. 1996.
- Simonds, Grant. Board Member. Outfitters and Guides Association, Boise, Idaho. 1996.
- Smith, Dr. Gerald. Paleontologist. University of Michigan.
- Smith, Randy. Wildlife Manager, Region 4. Idaho Department of Fish and Game, Jerome, Idaho. 1996.
- Smith, Regina. Bureau of Land Management, Winnemucca District, Nevada.
- Stanley, Wayne. Wildlife Biologist. U.S. Fish and Wildlife Service, Deer Flat National Wildlife Refuge, Nampa, Idaho. 1993.
- Stephens, George. Fish and Game Data Coordinator. Idaho Department of Fish and Game, Boise, Idaho. 1996.
- Taylor, Bryce. Bureau Chief. Range Management and Surface Leasing, Idaho Department of Lands, Boise, Idaho. 1996.
- Toweill, Dale. Wildlife Program Coordinator. Idaho Department of Fish and Game, Boise, Idaho. 1996.
- Trieman, Evelyn. Outdoor Recreation Planner. Bureau of Land Management, Elko District Office, Nevada.
- U.S. Air Force Bird-Aircraft Strike Hazard Team. Kirtland AFB, New Mexico. 1996.
- U.S. Air Force Flying Safety Center. Kirtland AFB, New Mexico. 1996.
- U.S. Navy Flying Safety Center. Norfolk, Virginia. 1996.
- Van Dyke, Walt. Wildlife Biologist, Oregon Department of Fish and Wildlife, Ontario, Oregon. 1995, 1997.
- Whitworth, Wes. Park Manager. Bruneau Dunes State Park, Bruneau, Idaho. 1996.
- Wilbanks, Jeff. Outdoor Recreation Specialist. Bureau of Land Management, Vale District, Oregon. 1996.
- Williams, Joe. Regional Wildlife Biologist. Nevada Division of Wildlife, Wells, Nevada. 1996.
- Yensen, Eric. Professor of Biology. Albertson College of Idaho, Caldwell, Idaho. 1996.
- Yohe, Robert. State Archaeologist and Acting State Historic Preservation Officer. Idaho State Historical Society and State Historic Preservation Office, Boise, Idaho. 1996, 1997.

Enhanced Training in Idaho Final EIS

Young, Garry. Senior Transportation Planner. Idaho Transportation Department, Boise, Idaho.
As cited in USAF 1993.

Zoellick, Bruce. Fishery Biologist. Bureau of Land Management, Lower Snake River District
Office, Idaho. 1996.

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IRENE JOHNSON, PRINCIPAL INVESTIGATOR - SOCIOECONOMICS, SAIC
B.S., Economics, George Mason University, 1989
M.A., Economics, University of Washington, 1991
Years of Experience: 7

KRISTI KORFANTA-HARRIS, ASSISTANT PRODUCTION MANAGER, SAIC
B.S., Psychology, Boise State University, 1987
Years of Experience: 6

MARGARET JENKS, GEOLOGIST, CONSULTANT
B.S., Geology, University of Idaho, 1977
M.S., Geology, University of Idaho, 1985
Years of Experience: 13

THOMAS H. LILLIE, LT COL, CHIEF, READINESS TRAINING RANGES BRANCH, HQ U.S. AIR FORCE
B.S., Wildlife Management, University of Southwestern Louisiana, 1976
M.S., Entomology, Colorado State University, 1978
Ph.D., Medical Entomology, University of Florida, 1985
Years of Experience: 18

JOE LOCKERD, PRINCIPAL INVESTIGATOR - HAZARDOUS WASTE, OEES

B.S., Zoology, University of Arkansas, 1974

M.S., Ecology, University of Arkansas, 1980

Years of Experience: 18

MIKE LUCAS, PRINCIPAL INVESTIGATOR - NOISE ANALYST, WYLE LABORATORIES

B.S., Physics, Moravian College, 1981

M.S., Mechanical Engineering, Lehigh University, 1983

M.S., Fluid Dynamics, Von Karman Institute, 1985

Years of Experience: 10

MARY MCFADZEN, WILDLIFE BIOLOGIST, SAIC

B.A., Zoology, University of Montana, 1986

M.S., Biology, Utah State University, 1996

Years of Experience: 10

TED MULLEN, WILDLIFE BIOLOGIST, SAIC

B.S., Biology, Loyola Marymount University, 1987

M.A., Ecology and Evolutionary Biology, University of California Santa Barbara, 1990

Years of Experience: 10

MONICA NEIWERT, BOTANIST, OEES

B.S., Botany, University of Idaho, 1994

Years of Experience: 4

GERALD F. PEASE, COL, CHIEF, RANGES AND AIRSPACE DIVISION, HQ U.S. AIR FORCE

B.A., French, San Diego State University, 1972

M.S., International Relations, Troy State University, 1976

Years of Experience: 24

SHIRL PERIZZOLO, TECHNICAL EDITOR, SAIC

B.S., Library Studies, Western Australia Institute of Technology, 1975

Years of Experience: 22

KEVIN J. PETER, DEPUTY PROJECT MANAGER, OEES

B.A., Anthropology, Pomona College, 1975

M.A., Anthropology, Washington State University, 1986

Years of Experience: 20

BILLY F. RICHEY, COL, DIRECTOR OF STAFF, 366 WING, U.S. AIR FORCE

B.S., Education, McMurry College, 1966

M.A., Education, Chapman College, 1984

Years of Experience: 27

KATHY L. ROSE, ENVIRONMENTAL ANALYST, OEES

B.A., Political Science/German, University of Massachusetts/Amherst,
1980

M.A., International Relations, George Washington University, 1983

M.S., Forest Resource Management, University of Idaho, 1996

Years of Experience: 4

JAMES R. RUDOLPH, PRINCIPAL INVESTIGATOR - CULTURAL RESOURCES, SAIC

B.A., Anthropology, University of Georgia, 1972

M.A., Anthropology, Southern Illinois University, 1977

Ph.D., Anthropology, University of California Santa Barbara, 1994

Years of Experience: 21

TERESA RUDOLPH, ARCHAEOLOGIST, OEES

B.A., Florida State University, 1975

M.A., Anthropology, Southern Illinois University, 1982

Years of Experience: 20

PAUL SAGE, EXECUTIVE COMMITTEE CHAIR, OEES

B.A., Religion and Philosophy, University of California, Santa Barbara, 1969

M.A., Development Economics, Louvain University, Belgium, 1972

M.A., Business and Public Administration, Cornell University, 1974

Years of Experience: 22

MICHAEL SLAVIC, PRINCIPAL INVESTIGATOR - WATER RESOURCES, OEES

B.S., Environmental Policy Analysis and Planning, University of California at Davis, 1990

Years of Experience: 6

FORREST SMITH, PUBLICATIONS MANAGER, SAIC

B.A., History and Political Science, University of California, Santa Barbara, 1970

Years of Experience: 24

KATHERINE STRICKLER, TECHNICAL LEAD - THREATENED & ENDANGERED, SAIC

B.A., Human Biology, Stanford University, 1986

M.S., Biological Sciences, Stanford University, 1990

Years of Experience: 10

CHRISTA STUMPF, ENVIRONMENTAL ANALYST, SAIC

B.S., Resource Recreation and Tourism, University of Idaho, 1995

M.S., Forest Resources and Geographic Information Systems, University of Idaho, 1996

Years of Experience: 2

JASON SUTTER, WILDLIFE BIOLOGIST, SAIC

B.A., Anthropology, University of California Los Angeles, 1989

M.S., Raptor Biology, Boise State University, expected May 1997

Years of Experience: 8

ROBERT A. THOMPSON, PRINCIPAL INVESTIGATOR - AIRSPACE, SAIC

B.S., Mathematics, Heidelberg College, 1968

M.A., Human Resources Management, Pepperdine University, 1979

Years of Experience: 28

DEBBIE TURNER, GIS, OEES

B.A., Environmental Studies, University of California at Santa Barbara, 1987

M.A., Geography, San Diego State University, 1991

Years of Experience: 8

CLAUDIA URRUTIA, GRAPHIC ILLUSTRATOR, SAIC

5 years undergraduate study, Advertising Design, Boise State University

Years of Experience: 4

ROBERT E. VAN TASSEL, PROJECT MANAGER, SAIC

B.A., Economics, University of California-Santa Barbara, 1970

M.A., Economics, University of California-Santa Barbara, 1972

Years of Experience: 25

JOHN VON REIS, WATER RIGHTS ANALYST, SAIC

B.A., Pre-Law, University of Michigan, 1966

J.D., Law, University of Washington School of Law, 1969

Years of Experience: 22

LYNN B. WHEELLESS, LT COL, CHIEF, AIR COMBAT COMMAND RANGE BRANCH, U.S. AIR FORCE

B.B.A., Production Management, University of Texas, 1976

M.B.A., Industrial Management, University of Missouri, 1980

Years of Experience: 20

CHRISTOPHER WILDT, ARCHAEOLOGIST, SAIC

B.A., Anthropology, Portland State University, 1991

Years of Experience: 7

WILLIAM WUEST, PRINCIPAL INVESTIGATOR - NOISE/SAFETY, SAIC

B.S., Political Science, St. Joseph's College, 1963

M.P.A., Public Administration, Auburn University, 1974

Years of Experience: 28

10.0 CONSULTATION

10.0 CONSULTATION

As part of the environmental impact analysis process, consultation and correspondence was performed with several state and federal agencies. Copies of the correspondence are included as part of this section. See Table 1.4-3 in Volume 1 for a list of meetings held between the Air Force and the Shoshone-Paiute Tribes of the Duck Valley Reservation as part of the Air Force's commitment toward maintaining government-to-government relations.

- U.S. Fish and Wildlife Service (USFWS)
 - ◆ Letter from USFWS, Snake River Basin Office, to HQ ACC: 4 June 1996
 - ◆ Letter from USFWS, Snake River Basin Office, to HQ ACC: 5 June 1996
 - ◆ Memorandum from HQ ACC to USFWS, Snake River Basin Office: 27 September 1996
 - ◆ Memorandum from HQ ACC to USFWS, Oregon State Office: 17 September 1996
 - ◆ Memorandum from HQ ACC to USFWS, Reno Office: 27 September 1996
 - ◆ Letter from USFWS, Snake River Office, to HQ ACC: 4 October 1996
 - ◆ Letter from USFWS, Nevada State Office, to HQ ACC: 25 October 1996
- Idaho Department of Fish and Game (IDFG)
 - ◆ Memorandum from HQ ACC to IDFG, Region III Wildlife Manager: 26 June 1996
 - ◆ Memorandum from HQ ACC to IDFG, Wildlife Program Coordinator: 26 June 1996
- Idaho State Historic Preservation Officer (SHPO)
 - ◆ Memorandum from HQ ACC to Idaho SHPO: 20 August 1996
 - ◆ Letter from Idaho SHPO to U.S. Air Force/Bureau of Land Management, August 6, 1997
- Nevada SHPO
 - ◆ Memorandum from HQ ACC to Nevada SHPO: 19 December 1996
- Oregon SHPO
 - ◆ Memorandum from HQ ACC to Oregon SHPO: 19 December 1996
- Fort McDermitt Reservation
 - ◆ Letter from HQ ACC to Fort McDermitt Tribal Council: 19 December 1996



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
4696 Overland Road, Room 576
Boise, Idaho 83705

June 4, 1996

Alton Chavis
Chief, Environmental Analysis Branch
Department of the Air Force
Headquarters Air Combat Command
HQ ACC/CEVA
Attention: Brenda Cook
129 Andrews Street, Suite 102
Langley Air Force Base, Virginia 23665-2769

Subject: Proposed Air Force Training Range in Eastern Owyhee County, Idaho --
Species List
SP #1-4-96-SP-197 File #200.0211

Dear Mr. Chavis:

The U.S. Fish and Wildlife Service (Service) is providing you with a list of endangered, threatened, candidate, and/or proposed species which may be present in the proposed Air Force Training Range in eastern Owyhee County, Idaho project area. You requested this species list in a letter dated May 3, 1996 received by this office on May 7, 1996. The list fulfills requirements for a species list under Section 7(c) of the Endangered Species Act of 1973 (Act), as amended. The requirements for Federal agency compliance under the Act are outlined in Enclosure 2. If the project is not started within 180 days of this letter, regulations require that you request an updated list. Please refer to the number shown on the list (Enclosure 1) in all correspondence and reports.

Section 7 of the Act requires Federal agencies to assure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. Federal funding, permitting, or land use management decisions are considered to be Federal actions subject to Section 7. If the proposed action involves a major construction activity that may affect a listed species, Federal agencies are required to prepare a Biological Assessment (BA). It would be prudent for you to consult informally with the Service in development of BAs. If the determination of that BA is that a listed species is likely to be affected adversely by the proposed project, the Act calls for formal Section 7 consultation through this office. If a proposed species

is likely to be jeopardized by a Federal action, regulations require a conference between the Federal agency and the Service.

Candidate species that appear on Enclosure 1 have no protection under the Act, but are included for your early planning consideration. Candidate species could be proposed or listed during the project planning period, and would then be covered under Section 7 of the Act. The Service advises an evaluation of potential effects on proposed and/or candidate species that may occur in the project area.

The list we are providing you reflects the Candidate Notice of Review published in the February 28, 1996 Federal Register. You will note that the Service is no longer categorizing candidates as C1, C2, and C3. Beginning with the referenced Notice, candidate species are those formerly identified as category 1, plants and animals for which the Service has sufficient information to support issuing a proposed rule for listing under the Endangered Species Act (Act). Species that do not meet that information standard are no longer regarded as candidates and do not appear in the Notice of Review. Further, you will note that several Idaho species that were listed as C1 in previous Notices do not appear on this most recent list. In preparing the Notice, the Service evaluated all species and revised the list to include only those that met the aforementioned information requirements. Candidates that appear in the Notice for Idaho are the bull trout, Northern Idaho ground squirrel, the Great Basin population of spotted frog, and Christ's paintbrush. The list of threatened and endangered species remains unchanged.

The Snake River Basin Office continues to have interest in a number of plants and animals that are not designated as endangered, threatened, or candidate species under the Act. We are concerned about their population status and threats to their long-term viability. In your efforts toward ecosystem-level management, we suggest that you consider these species and their habitats in project planning and review. The Service will continue to provide you with information that we have about those species. Any concerns we raise about those species will be in context with the National Environmental Policy Act, Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, and other authorities.

Other information requested concerning bighorn sheep and bat breeding habitat in eastern Owyhee County would be available directly from the Conservation Data Center, Idaho Department of Fish and Game and Lower Snake River Ecosystem office of the Bureau of Land Management. The addresses for these agencies are:

Conservation Data Center
Attention: George Stephens
P.O. Box 25
Boise, Idaho 83707

Bureau of Land Management
Lower Snake River Ecosystem
3948 Development Avenue
Boise, Idaho 83705


Idaho Department of Fish and Game
Region 3
3101 South Powerline Road
Nampa, Idaho 83686

Idaho Department of Fish and Game
Region 4
868 East Main Street
Jerome, Idaho 83338

We encourage you to contact this office if you have questions about Section 7 requirements, or about the potential effects of the proposed project on listed or candidate species that appear on

the enclosed list. Please contact Marilyn Hemker of this office at (208) 334-1931 if you need assistance. Thank you for your continued interest in endangered species conservation.

Sincerely,


Acting Supervisor, Snake River Basin Office

Enclosures

cc: IDFG, Nampa
IDFG, Jerome
CDC, Boise (Stephens)
BLM, Lower Snake River Ecosystem (Clark)

ENCLOSURE 1

LISTED AND PROPOSED ENDANGERED AND THREATENED
SPECIES, AND CANDIDATE SPECIES, THAT MAY OCCUR
WITHIN MOUNTAIN HOME AIR FORCE BASE
SP #1-4-96-SP-197

LISTED SPECIES

Birds

Bald eagle (LT)
(*Haliaeetus leucocephalus*)

Peregrine falcon (LE)
(*Falco peregrinus anatum*)

Invertebrates

Snake River physa snail (LE)
(*Physa natricina*)

Bliss Rapids snail (LT)
(*Taylorconcha serpenticola*)

Idaho springsnail (LE)
(*Pyrgulopsis idahoensis*)

Bruneau hot springsnail (LE)
(*Pyrgulopsis bruneauensis*)

PROPOSED SPECIES

None

CANDIDATE SPECIES

Amphibians

Spotted frog (C)
(*Rana pretiosa*)

Great Basin Population
Owyhee County
(Note: Suitable habitat may
occur throughout the Great Basin)

Fish

Bull trout (C)
(*Salvelinus confluentus*)

The Fish and Wildlife Service has concerns about the following plants and animals. Although these species have no status under the Endangered Species Act, we are concerned about their population status and threats to their long-term viability. In context with ecosystem-level management, we suggest that you consider these species and their habitats in project planning and review.

Mammals

Townsend's big-eared bat
(*Corynorhinus townsendii*)

Yuma myotis (bat)
(*Myotis yumanensis*)

Spotted bat
(*Euderma maculatum*)

California bighorn sheep
(*Ovis canadensis californiana*)

Birds

Black tern
(*Chlidonias niger*)

Trumpeter swan
(*Cygnus buccinator*)

White-faced ibis
(*Plegadis chihi*)

Western burrowing owl
(*Speotyto cunicularia hypugaea*)

Ferruginous hawk
(*Buteo regalis*)

Preble's shrew
(*Sorex preblei*)

Loggerhead shrike
(*Lanius ludovicianus*)

Fish

Interior redband trout
(*Oncorhynchus mykiss gairdneri*)

Invertebrates

California floater
(*Anodonta californiensis*)

Idaho Dunes tiger beetle
(*Cicindela arenicola*)

Plants

Davis' peppergrass
(*Lepidium davisii*)

Mulford's milkvetch
(*Astragalus mulfordiae*)

Mud flat milkvetch
(*Astragalus yoder-williamsii*)

Bruneau River prickly phlox
(*Leptodactylon glabrum*)

Slick spot peppergrass
(*Lepidium papilliferum*)

GENERAL COMMENTS

LE = listed endangered
LT = listed threatened
C = candidate

CANDIDATE -- Taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Proposed rules have not yet been issued because this action is precluded by other listing activity. Development and publication rules for these taxa are anticipated. The Service encourages State and other Federal agencies as well as other affected parties to give consideration to these taxa in environmental planning.

FEDERAL AGENCIES' RESPONSIBILITY UNDER SECTIONS 7(a) AND (c)
OF THE ENDANGERED SPECIES ACT

SECTION 7(a) - Consultation/Conference

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species; or result in destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after determining the action may affect a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7(c) - Biological Assessment for Major Construction Activities ^{1/}

Requires Federal agencies or their designees to prepare Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action^{2/} on listed and proposed species. The process begins with a Federal agency in requesting from FWS a list of proposed and listed threatened and endangered species (list attached). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

We recommend the following for inclusion in the BA; an onsite inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species are present; a review of literature and scientific data to determine species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the BA should be forwarded to our office.

^{1/} A major construction activity is a construction project (or other undertaking having similar physical impacts) which is a major action significantly affecting the quality of human environment as referred to in the NEPA (42 U.S.C. 4332 (2)(c)).

^{2/} "Effects of the action" refers to the direct and indirect effects on an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
4696 Overland Road, Room 576
Boise, Idaho 83705

June 5, 1996

Alton Chavis
Chief, Environmental Analysis Branch
Department of the Air Force
Headquarters Air Combat Command
HQ ACC/CEVA
(Attention: Brenda Cook)
129 Andrews Street, Suite 102
Langley Air Force Base, Virginia 23665-2769

Subject: Notice of Intent to Prepare an Environmental Impact Statement for Enhanced Training in Idaho, Mountain Home Air Force Base.
File # 200.0211 ER # 96/0209

Dear Mr. Chavis:

The U. S. Fish and Wildlife Service (Service) is responding to your request for comments on the proposal to establish a tactical training range in Owyhee County, Idaho to support enhanced training for Mountain Home Air Force Base (AFB) and the Idaho Air National Guard. Your intent to prepare an Environmental Impact Statement (EIS) for the proposal was published in the January 29, 1996 Federal Register. We request that the Air Force consider the following issues and concerns in the National Environmental Policy Act (NEPA) analysis for the project.

In general, we are concerned about how development of the enhanced training range will affect fish and wildlife and their habitats. They could be adversely affected by increased noise disturbance from low altitude aircraft maneuvers, habitat loss or alteration from facility construction and use, and range fire. To facilitate assessment of project effects on fish and wildlife, the Service requests that the NEPA document include a full description of the location of threat emitter sites, miles and locations of any new and improved roads, the elevations and quantities of sorties and other related actions involved with the project. Also, the impacts of use, operation, and maintenance of facilities associated with the project should be fully addressed in the NEPA document. The Air Force should also describe the actions it will take to avoid, minimize, and compensate for the impacts of project actions on fish and wildlife species and their habitat.

Following are the Service's specific suggestions for analysis.

Endangered Species Act The Air Force should ensure that the project is in compliance with the Endangered Species Act of 1973 (Act), as amended. The Service has recently been contacted by the Air Force for a project specific species list which will be provided under separate cover.

Section 7 of the Act requires Federal agencies to assure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. Funding, permitting, or land use management decisions are considered Federal actions subject to Section 7. If the proposed action involves a major construction activity that may affect a listed species, Federal agencies are required to prepare a Biological Assessment (BA).

The direct, indirect, and cumulative effects of the action on listed species should be thoroughly assessed in the BA, as well as effects of interrelated and interdependent project actions. Interrelated actions are part of a larger action and depend on that larger action for their justification and implementation. Interdependent actions have no independent utility apart from the proposed actions. If your determination is that a listed species is likely to be affected adversely by the proposed project, the Act calls for formal Section 7 consultation through this office. If a proposed species is likely to be jeopardized by a Federal action, regulations require a conference between the Federal agency and the Service. You may designate, in writing, another non-Federal entity to represent you in consultation. All issues related to listed species should be incorporated into your NEPA analysis.

Candidate Species Two candidate species, spotted frog, and bull trout, occur in the project area. Candidate species have no protection under the Act, but are addressed here for your early planning consideration. Candidate species could be proposed or listed during the project planning period, and would then be covered under Section 7 of the Act. The Service advises a pre-project survey of the project area, an evaluation of the potential effects and measures to avoid effects on candidate species.

Species of Concern The Service defines "species of concern" as those species that were categorized as candidate species prior to the Candidate Notice of Review published in the February 28, 1996 Federal Register. We continue to be concerned about their population status and threats to their long-term viability. In your efforts toward ecosystem-level management, we suggest that you consider analysis of the effects of each alternative on species of concern and their habitats. The Service recommends that the alternatives analyzed and the final decision reflect full consideration of these issues. For example, we are concerned about how California bighorn sheep will be affected by noise and other impacts associated with the proposal. We suggest the Air Force consider developing a long term conservation agreement with appropriate State and Federal agencies to contribute to the conservation of California bighorn sheep in the project area.

Sensitive Species The Idaho Department of Fish and Game (IDFG) and the BLM have reported that sage grouse, a native species associated with the sagebrush-grass steppe ecosystem has experienced population declines in recent years. Because of the large scope of the Air Force proposal in the sagebrush-grass steppe desert ecosystem, we recommend that you work with the BLM to conduct a thorough pre-project field inventory of the project area to predict project effects on sage grouse and other key wildlife species. In addition, we recommend you conduct field inventories of other rare and sensitive plants and animals in the project areas and consider the

impacts of project activities on them. Inventories should be conducted during appropriate life stages/seasons of the year that these species are present in the project area.

Migratory Bird Treaty Act The action proposed in the NEPA analysis should be in compliance with the Migratory Bird Treaty act (MBTA)(16 U.S.c. 703-712; Ch 128; July 13, 1918; 40 Stat 755, as amended). The MBTA prohibits the take of migratory birds, nests, eggs and nestlings. The Federal list of migratory birds (50 CFR 10.13) includes most of the birds found in Idaho. For example, we are concerned about impacts to raptors which are found in high densities in the project area. Site specific information from studies conducted in the project area should be used to determine potential impacts to raptors, waterfowl, and other migratory birds in the project area. A site specific list of actions the Air Force will take to avoid potential impacts to these birds should be included as part of the action proposed in the EIS and reflected in the final decision.

Training flights might traverse concentrations of migratory birds at Minidoka National Wildlife Refuge (NWR), C.J. Strike Wildlife Management Area, Deer Flat NWR and in the canyon river systems on lands managed by the BLM. For example, white pelicans nest at Minidoka NWR and these birds may soar up to several thousand feet in altitude when weather conditions allow. These birds are present on the refuge from approximately March through October. The EIS should consider risks associated with the enhanced training system to this and other concentrations of birds in the action area. Contact our Deer Flat National wildlife Refuge Office at (208) 467-9278 and Gary Will, Idaho Department of Fish and Game at (208) 334-2920 for further detailed information on migratory waterfowl use near training routes and military operations areas.

Wetland Impacts All wetlands in the impact area should be inventoried and fully described in terms of functions and values. These wetlands include those areas that are not classified as jurisdictional wetlands. Acreage of wetlands, by type, should also be included. You should describe alternative actions which avoid, minimize, and compensate for wetland impacts. The Service recommends that you request assistance from the U.S. Army Corps of Engineers (Corps) to determine whether a section 404 Clean Water Act permit will be required for any component of the proposed work. The NEPA analysis should thoroughly assess the importance of wetlands in the project area to water birds, wading birds, shorebirds, and waterfowl, and the potential for the proposal to affect these functions:

Watershed - Aquatic Species The NEPA document should describe project impacts to resident fish and other aquatic species in the project areas and downstream of the project area. The increased risk of wildfires started from project activities and fire's potential impact to watershed conditions should be analyzed. Fire, vegetation removal, and other ground disturbance, (e.g. road construction and reconstruction) on high desert plateaus in the project areas could lead to significant increases in sediment loads in remote river basins of southwestern Idaho. Increased sediment loads could adversely impact sensitive aquatic ecosystems that support native fish species such as redband trout.

Noise Impacts on Fish and Wildlife The Air Force should assess the impact on wildlife from overflights, sonic booms, and other noise generated from project activities. We recommend you conduct studies in the project area to predict noise impacts on wildlife species, addressing behavioral and physiological aspects that affect them. For instance, California bighorn sheep rely on hearing as well as sight to escape predators and survive in their harsh habitat where landslides and rockfalls are common occurrences. Songbirds rely on hearing when defining and defending

nesting territories and finding mates. The NEPA analysis should address how noise generated from project aircraft will impact these and other species, including cumulative effects.

Currently, very little information exists on aircraft noise levels and those associated noise impacts on fish and wildlife in the project area. The Air Force needs to first establish a baseline level of noise that is exclusive of current aircraft-generated noise. We recommend you designate areas currently outside MOAs to collect this baseline information. Second, the Air Force needs to establish current levels of aircraft-generated noise in the existing MOAs. Third, future levels of aircraft noise for the all alternatives should be considered in the NEPA analysis. For the best understanding of possible effects, we suggest you analyze maximum future potential noise levels for each alternative. Fourth, studies should be established to monitor and document impacts to fish and wildlife from aircraft noise levels. We are particularly concerned about cumulative and additive effects of noise as the training range continues to expand.

The Air Force proposal includes the expansion in total airspace for the training proposal. The Service is concerned that designating additional air space would have the effect of spreading noise impacts from aircraft maneuvers over a larger area, and thus have more impact on fish and wildlife resources. You should evaluate the relative effects of greater intensity of impacts in a smaller area versus expanding those impacts over a larger geographic area. The Service recommends that you evaluate an alternative that keeps the airspace to the existing total size.

Wildfire - Wildlife Impacts The Air Force should thoroughly assess the increased likelihood of wildfire and the resulting impact on perennial grass-sagebrush vegetative communities as a result of the project alternatives. Fire caused by vehicles, flares, or aircraft crash events could lead to removal of existing vegetation and invasion by exotic plants. Exotic plants, such as cheatgrass and medusa head, can quickly invade places where native vegetation is eliminated, as would occur following a fire event or ground disturbance. The NEPA analysis should consider how exotic plant invasions following project related wildfires will be avoided and mitigated. Both terrestrial and aquatic animal species including migratory birds could be adversely affected by such changes in the vegetative community.

Cumulative Effects Approximately 2.43 million hectares of the sagebrush-grass steppe in the western Snake River basin have been converted to exotic annual vegetation, primarily cheatgrass and medusahead (U. S. Department of Interior. 1995. Endangered Ecosystems of the United States: a Preliminary Assessment of Loss and Degradation p. 47). The Service requests a complete assessment of the cumulative effects of the proposed project and past, present, and future activities on fish and wildlife resources in the analysis area. The activities considered should include, for example, other military and private operations. We further suggest you consider how your decision will affect long-term conditions of the area.

Including the following measures in your project alternatives would address some of our concerns with fish and wildlife resources.

- ☐ Establish "no fly zones" or minimum floors on aircraft operations in sensitive wildlife areas, including canyons.
- ☐ Plan the timing of training exercises to avoid disturbance during sensitive periods of use for fish and wildlife resources.

- ☐ Provide for complete clean up of waste such as concrete, old munitions, and equipment at designated waste repository or dump sites in the project areas.
- ☐ Implement an information and education program for trainees and other personnel concerning species conservation and desert ecosystems.
- ☐ Work with the BLM to coordinate the improvement of fish and wildlife habitat in areas where this habitat may be affected by both Air Force actions and grazing administered by the BLM.

We appreciate the efforts of Colonel Billy Richey, Lieutenant Colonel Tom Lillie, and Lieutenant Colonel Lynn Wheelless, in keeping us informed of the scope of the Enhanced Training in Idaho proposals during meetings held on March 22, 1996 and May 15, 1996. If you have any further question regarding our comments please contact Marilyn Hemker of my staff at (208) 334-1931

Sincerely,

Susan B. Martin
Acting Supervisor, Snake River Basin Office

cc: IDFG, Headquarters (Toweill)
IDFG, Nampa (Grunder)
BLM, Boise District (Clark)
BLM, State Office (Evans)
FWS-BFA (ERT), Washington D.C.
OEPC, Portland (Sleeper)



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

16 7 827 1023

MEMORANDUM FOR U.S. Fish and Wildlife Service
Mr. Robert G. Ruesink
Supervisor
Snake River Basin Office
4696 Overland Road, Room 576
Boise ID 83705

FROM: HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2769

SUBJECT: Update of Species List - SP #1-4-96-SP-197

1. Pursuant to 50 CFR 402.12(C), "Request for Information," we requested, and you provided, a Species List, SP # 1-4-96SP-197, dated June 4, 1996, of potentially affected listed, proposed, and candidate species that may exist in the area of the Proposed Air Force Training Range (ETI) in eastern Owyhee County, Idaho. Thank you for your timely response.

2. To ensure accurate and timely information for the ETI EIS analysis, please provide an update to SP # 1-4-96-197 of any additions and/or deletions of species that may have occurred since the date of that letter. Please provide a list of potentially affected listed, proposed, and candidate species that may exist in the area under the airspace expansion for the Sheep Creek MOA. Attachment 1 illustrates the LAT-LONG for the perimeter of the area of interest. In addition, please identify other sensitive biological resources (e.g., transplanted bighorn herds, fawning areas, key bird migratory routes, bat breeding habitat, etc.) that occur or may occur in eastern Owyhee County. Please send or fax to:

HQ ACC/CEVA
Attn: Ms. Brenda Cook
129 Andrews Street, Suite 102
Langley Air Force Base, Virginia 23665-2769
Commercial: (804) 764-6197
Fax Number: (804) 764-5339

3. If you have any further questions concerning this correspondence or require additional information, please contact Ms. Brenda Cook at (804) 764-6197 or Dr. Ted Doerr, our principle biologist, with Science Applications International Corporation, at (505) 842-7845. Thank you for your assistance in this matter.



ALTON CHAVIS
Chief, Environmental Analysis Branch

Attachment:

1. Legal Descriptions for affected lands
2. Maps for area of interest

ATTACHMENT 1

The first area of interest was covered in the letter dated May 3, 1996 and encompasses approximately 144 townships in eastern Owyhee County, Idaho. The north boundary is T 5 S and the south boundary is T 16 S. The west boundary is R 1 E and the east boundary is R 12 E. We are requesting an update of the information provided in the letter dated June 4, 1996 (SP #1-4-96-SP-197).

The LAT-LONG for this area is:

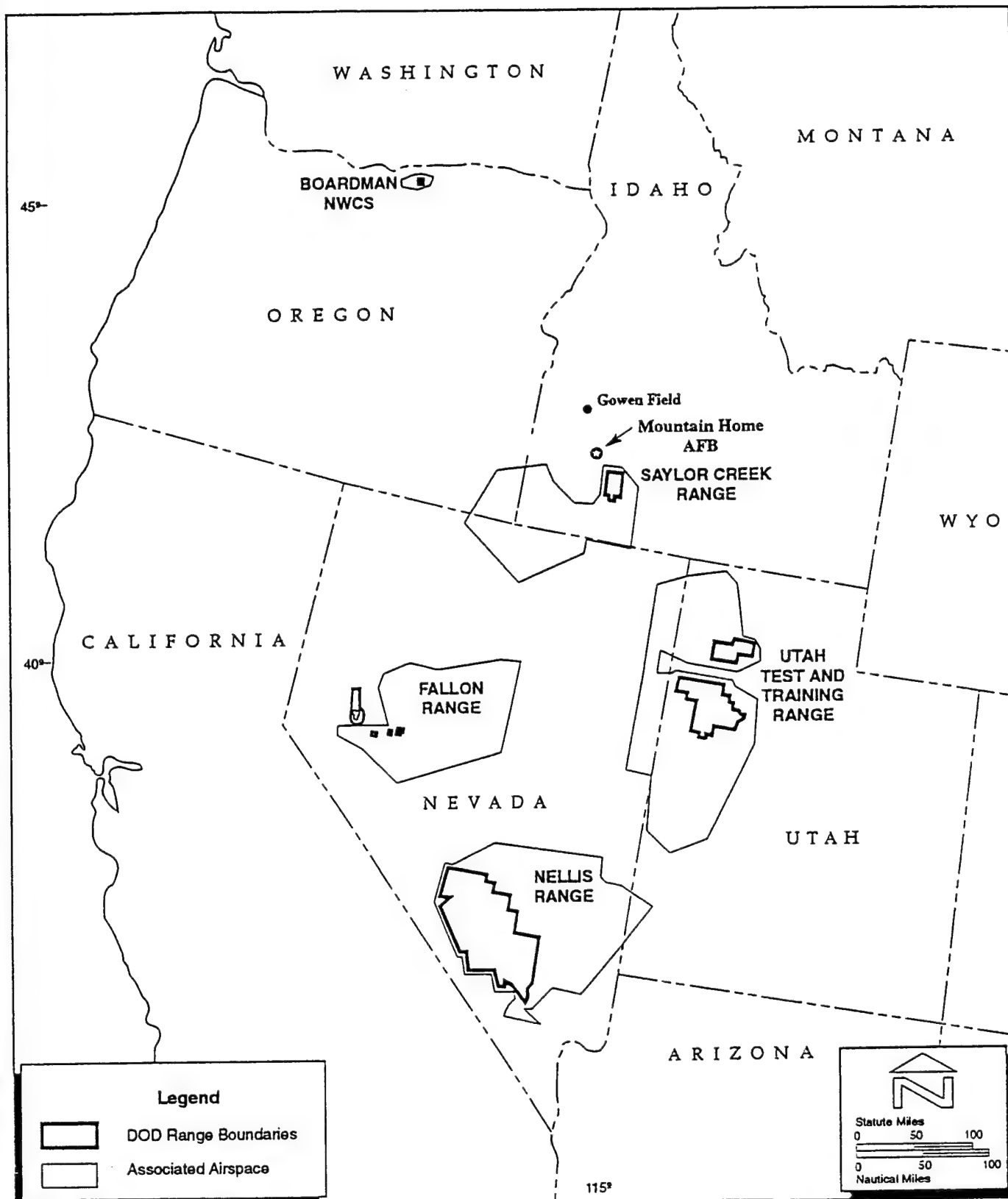
LAT - 42° 00' 00" N
LAT - 43° 00' 00" N
LONG - 115° 00' 00" W
LONG - 116° 15' 00" W

The second area of interest encompasses approximately 36 townships in northeastern Owyhee County, Idaho. The north boundary is T 7 S and the south boundary is T 10 S. The west boundary is R 3 W and the east boundary is R 6 E. A portion of this area is covered in the area listed above; however, the majority of this second area of interest is west of the above referenced area.

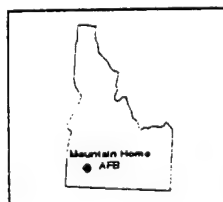
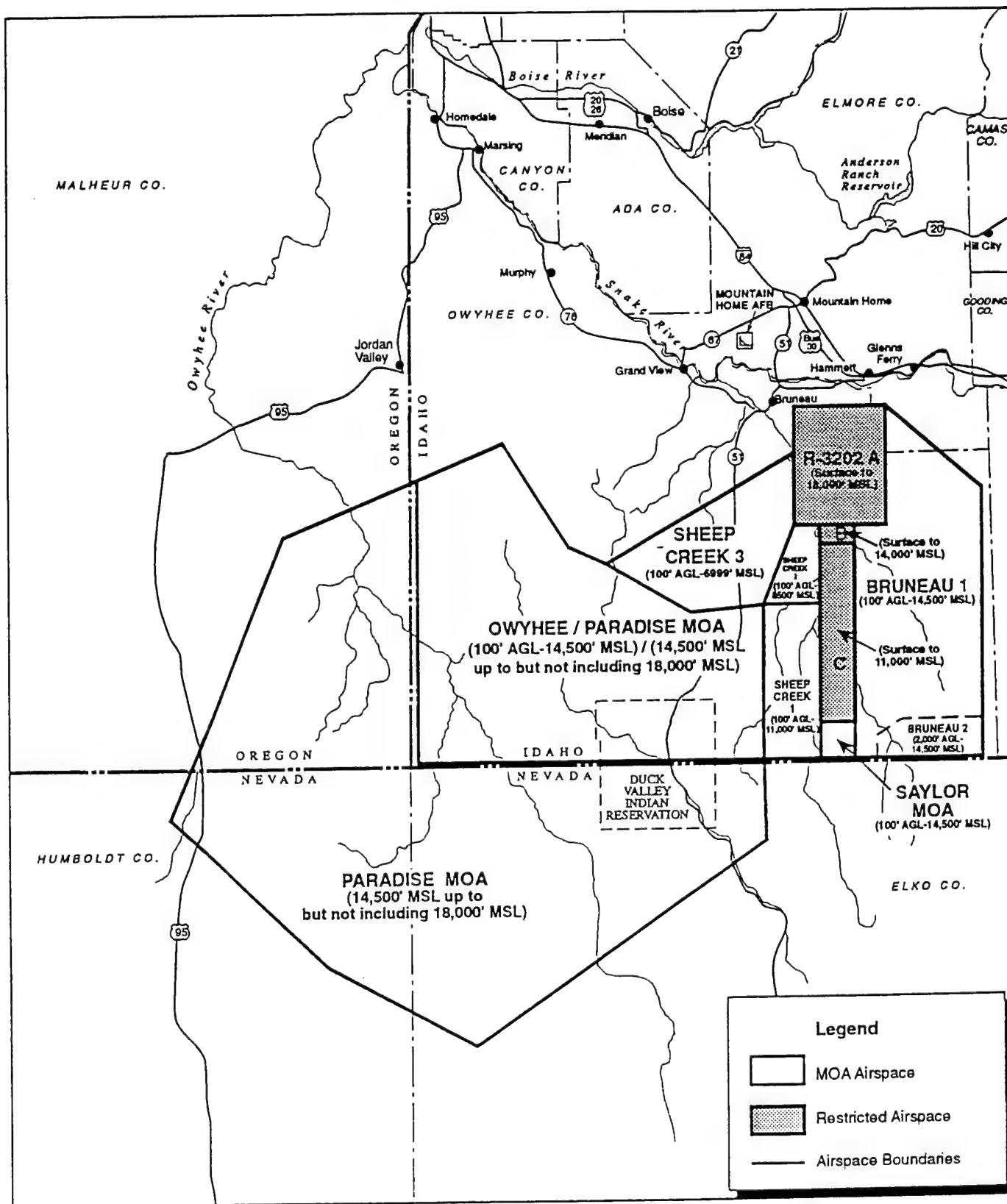
The LAT-LONG for this ROI boundary for ETI is:

LAT - 42° 50' 00" N
LAT - 42° 15' 00" N
LONG - 116° 15' 00" W
LONG - 117° 00' 00" W

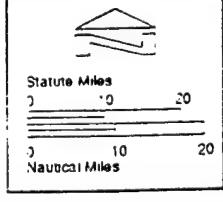
ATTACHMENT 2



LOCATION OF MT HOME AFB AND MHRC

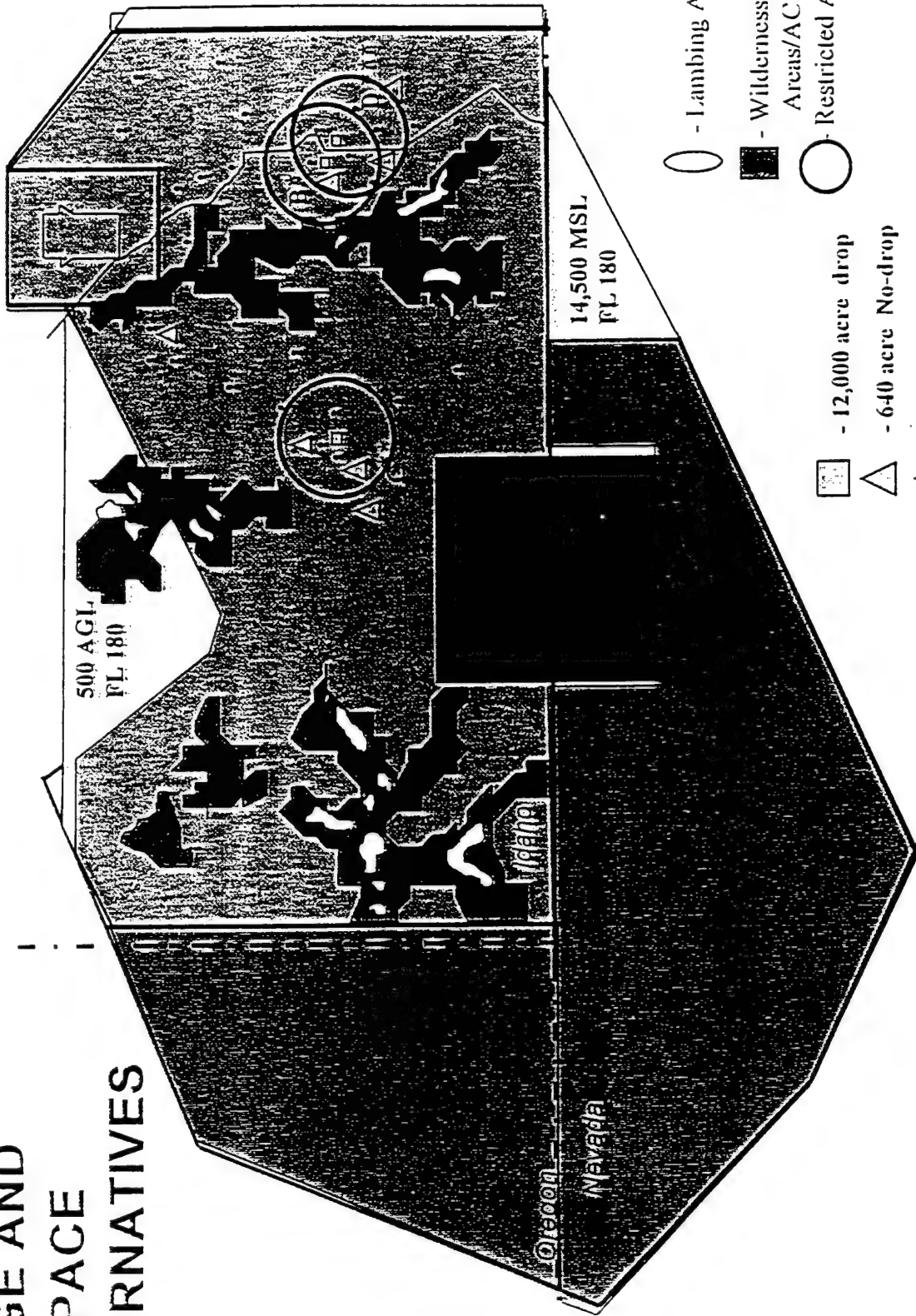


CURRENT AIRSPACE MOUNTAIN HOME AFB RANGE COMPLEX



PROPOSED RANGE AND AIRSPACE ALTERNATIVES

Mountain
Home



- - Lambing Areas
- - Wilderness Study Areas/ACI/C's
- - Restricted Airspace

- - 12,000 acre drop
- △ - 640 acre No-drop
- △ - 5 acre No-drop
- - Emitter sites
- ◻ - Airspace modifications

*Clover Butte Option

**Grassmore Option

***Juniper Butte Option (plus airspace to the Twin Falls County Line)

Note: Only one drop area required.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

17 SEP 1995

MEMORANDUM FOR U.S. Fish and Wildlife Service
Mr. Russ Peterson, Supervisor
Oregon State Office
2600 SE 98th Avenue
Suite 100
Portland OR 97266

FROM: HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2769


SUBJECT: Proposed Enhanced Training in Idaho

1. The U.S. Air Force, HQ ACC/CEVA, is preparing an Environmental Impact Statement addressing the creation of a tactical training range in the eastern half of Owyhee County, Idaho. Attachment 1 illustrates current military operating areas (MOA) over southwestern Idaho and the proposed changes. The proposed range would consist of one 12,000 acre (4,858 ha) tactical training range with drop targets; one 640 acre (259 ha) simulated bombing target area and four, 1-acre (0.4 ha) simulated bombing target areas. No ordnance will be dropped on the simulated bombing areas. In addition, ten 1-acre (0.4 ha) sites and twenty 0.25 acre (0.1 ha) sites will be constructed to place electronic emitters simulating enemy threat radars. The land for this proposal would be withdrawn from public use in accordance with the provisions of the Engle Act of 1958.
2. The proposed range would facilitate comprehensive training exercises for the 366th Wing from Mountain Home Air Force Base. The new training range would provide realistic battlefield arrays of targets and enemy defense positions and tactics. The training objective is to expose aircrews and weapons systems to realistic and probable battlefield before they are encountered in combat. Providing realistic training locally enhances the efficiency and operational readiness of the 366th Wing.
3. Pursuant to 50 CFR 402.12(C), "Request for Information," please provide a list of potentially affected listed, proposed, and candidate species and critical habitat that may exist in the area under the Paradise and Saddle MOAs in southeastern Oregon. Attachment 2 illustrates the LAT-LONG descriptions for the perimeter of the area of interest. In addition, please identify other sensitive biological resources (e.g., transplanted bighorn herds, fawning areas, key bird

migratory routes, bat breeding habitat, etc.) that occur or may occur within this area of northwestern Nevada. Please send or fax to:

HQ ACC/CEVA
Attn: Ms. Brenda Cook
129 Andrews Street, Suite 102
Langley Air Force Base, VA 23665-1279
Commercial: (804) 764-6197
Fax Number: (804) 764-5339.

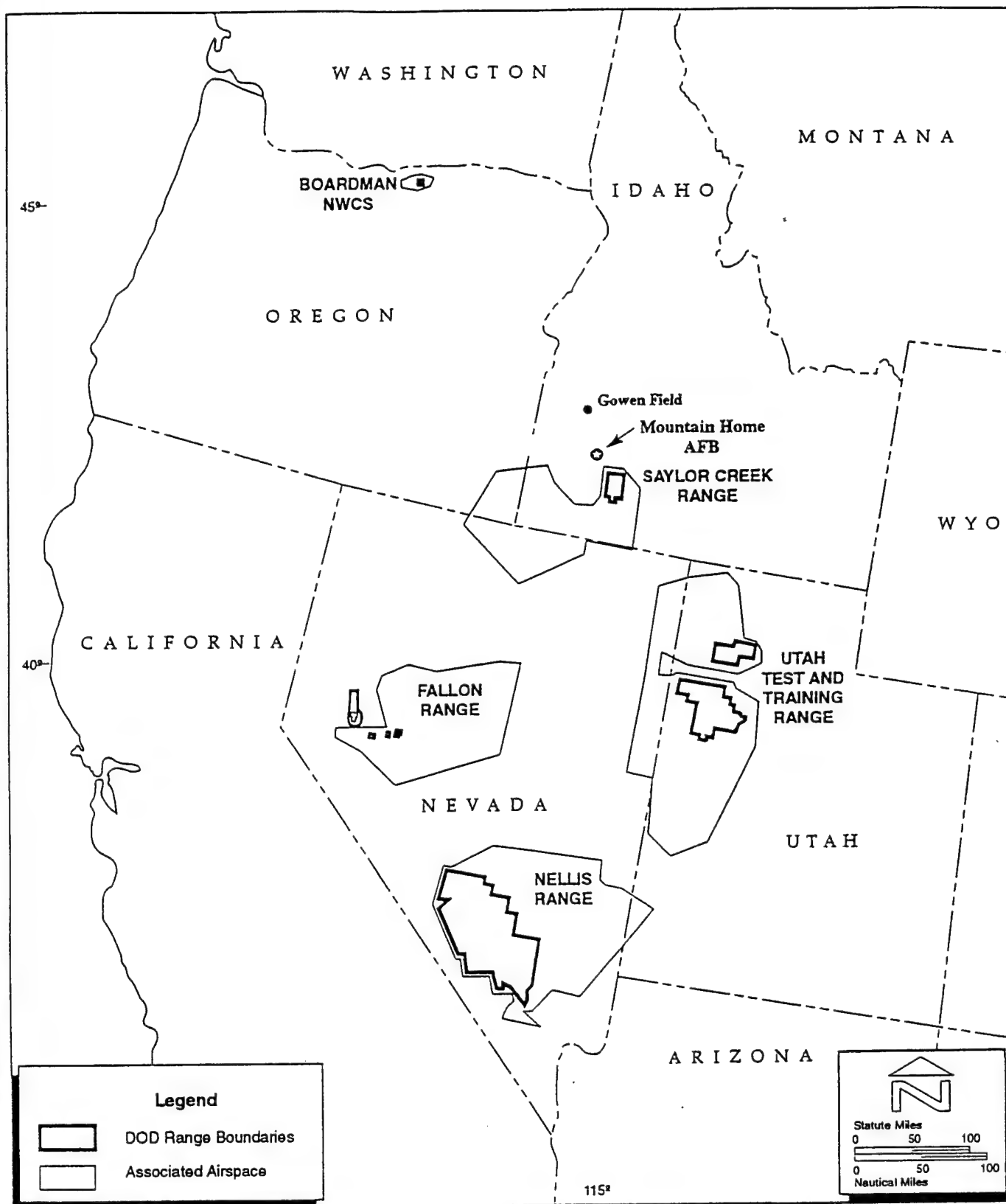
4. If you have any further questions concerning this correspondence or require additional information, please contact Ms. Brenda Cook at (804) 764-6197 or Dr. Ted Doerr, our principle biologist with Science Applications International Corporation at (505) 842-7845. Thank you for your assistance in this matter.


ALTON CHAVIS
Chief, Environmental Analysis Branch

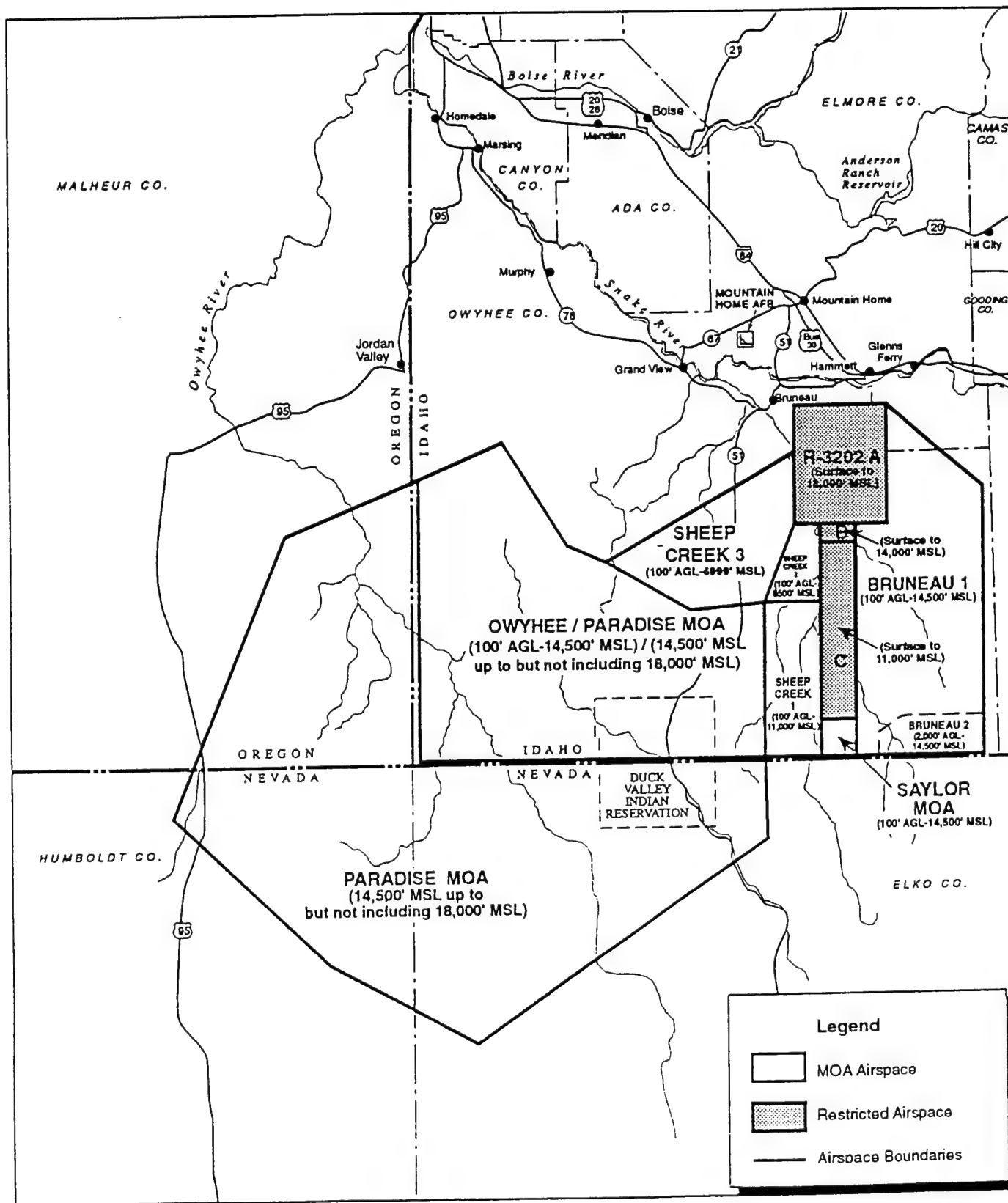
Attachment:

1. Maps for Area of Interest
2. Legal Descriptions for Affected Lands

ATTACHMENT 1



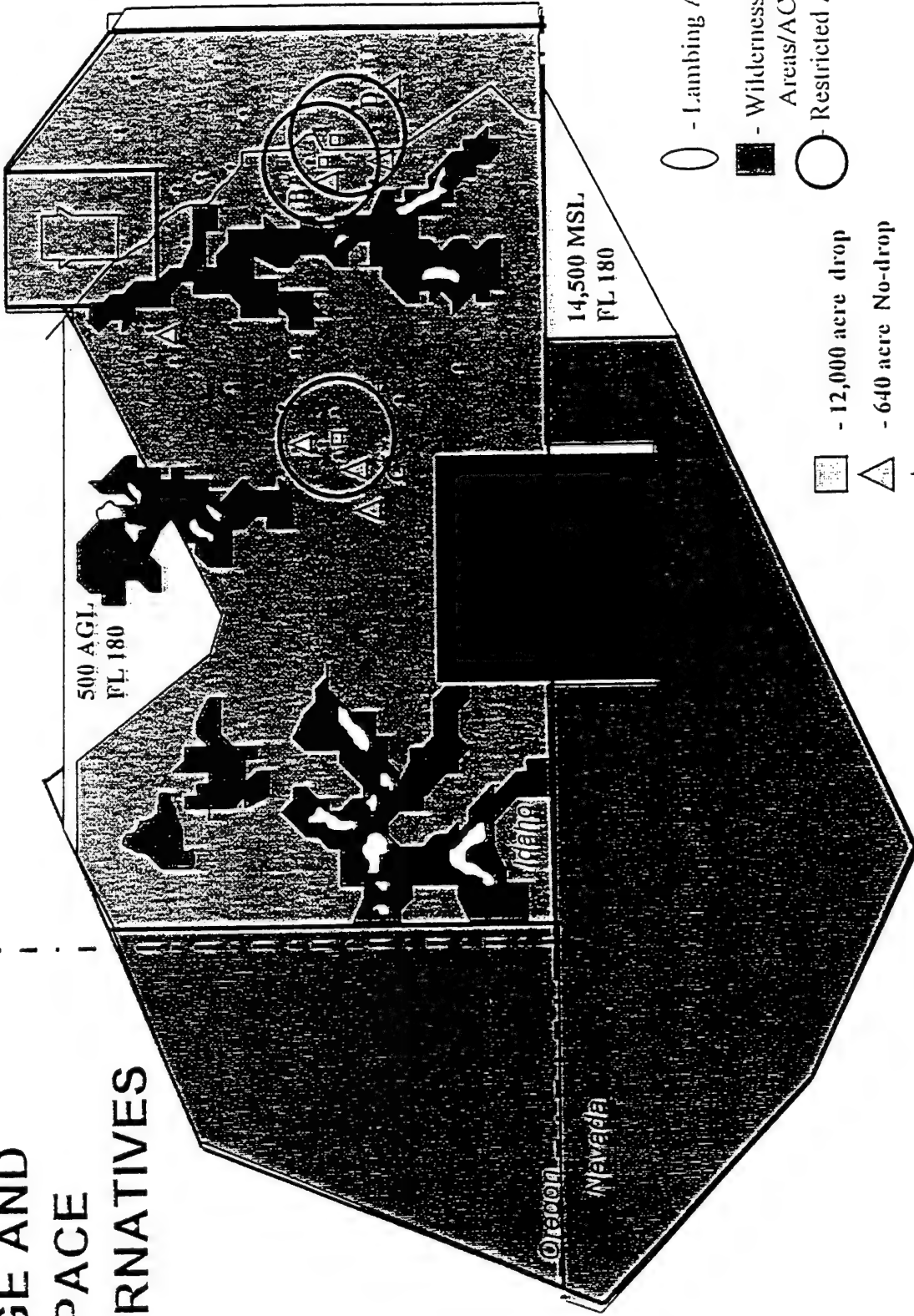
LOCATION OF MT HOME AFB AND MHRC



CURRENT AIRSPACE MOUNTAIN HOME AFB RANGE COMPLEX

PROPOSED RANGE AND AIRSPACE ALTERNATIVES

Mountain
Home



- - Lambing Areas
- - Wilderness Study Areas/ACIECs
- - Restricted Airspace

- ▣ - 12,000 acre drop
- △ - 640 acre No-drop
- △ - 5 acre No-drop
- - Emitter sites
- ◻ - Airspace modifications

AC Chaco Butte Option

AC Chaco Butte Option

AC Chaco Butte Option (plus airspace to the Twin Falls County Line)

Note: Only one drop area required.

ATTACHMENT 2

The area of interest under the Paradise MOA in Oregon is in LAT-LONG:

LAT - 42° 00' 00" N
LAT - 42° 50' 00" N
LONG - 117° 00' 00" W
LONG - 117° 45' 00" W

The second area of interest is the area under the Saddle MOA. This area in LAT-LONG is:

LAT - 42° 50' 00" N
LAT - 43° 30' 00" N
LONG - 117° 00' 00" W
LONG - 118° 40' 00" W



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

27 SEP 1996

MEMORANDUM FOR U.S. Fish and Wildlife Service

Mr. Carlos Mendoca, Supervisor
Reno Fish and Wildlife Service Office
4600 Kietzke Lane
Building C, Room 125
Reno NV 89502-5093

FROM: HQ ACC/CEVA

129 Andrews Street, Ste 102
Langley Air Force Base, VA 23665-2769

SUBJECT: Proposed Enhanced Training in Idaho

1. The U.S. Air Force, HQ ACC/CEVA, is preparing an Environmental Impact Statement addressing the creation of a tactical training range in the eastern half of Owyhee County, Idaho. Attachment 1 illustrates current military operating areas (MOA) over southwestern Idaho and the proposed changes. The proposed range would consist of one 12,000 acre (4,858 ha) tactical training range with drop targets; one 640 acre (259 ha) simulated bombing target area and four 1-acre (0.4 ha) simulated bombing target areas. No ordnance will be dropped on the simulated bombing areas. In addition, ten 1-acre (0.4 ha) sites and twenty 0.25 acre (0.1 ha) sites will be constructed to place electronic emitters simulating enemy threat radars. The land for this proposal would be withdrawn from public use in accordance with the provisions of the Engle Act of 1958.


2. The proposed range would facilitate comprehensive training exercises for the 366th Wing from Mountain Home Air Force Base. The new training range would provide realistic battlefield arrays of targets and enemy defense positions and tactics. The training objective is to expose aircrews and weapons systems to realistic and probable battlefield before they are encountered in combat. Providing realistic training locally enhances the efficiency and operational readiness of the 366th Wing.

3. Pursuant to 50 CFR 402.12 (C), "Request for Information," please provide a list of potentially affected listed, proposed and candidate species and critical habitat that may exist in the area under the Paradise MOA in northwestern Nevada. Attachment 2 illustrates the LAT-LONG descriptions for the perimeter of the area of interest. In addition, please identify other sensitive biological resources (e.g., transplanted bighorn herds, fawning areas, key bird migratory routes,

bat breeding habitat, etc.) that occur or may occur within this area of northwestern Nevada.
Please send or fax to:

HQ ACC/CEVA
Attn: Ms. Brenda Cook
129 Andrews Street, Suite 102
Langley Air Force Base, VA 23665-1279
Commercial: (804) 764-6197
Fax Number: (804) 764-5339.

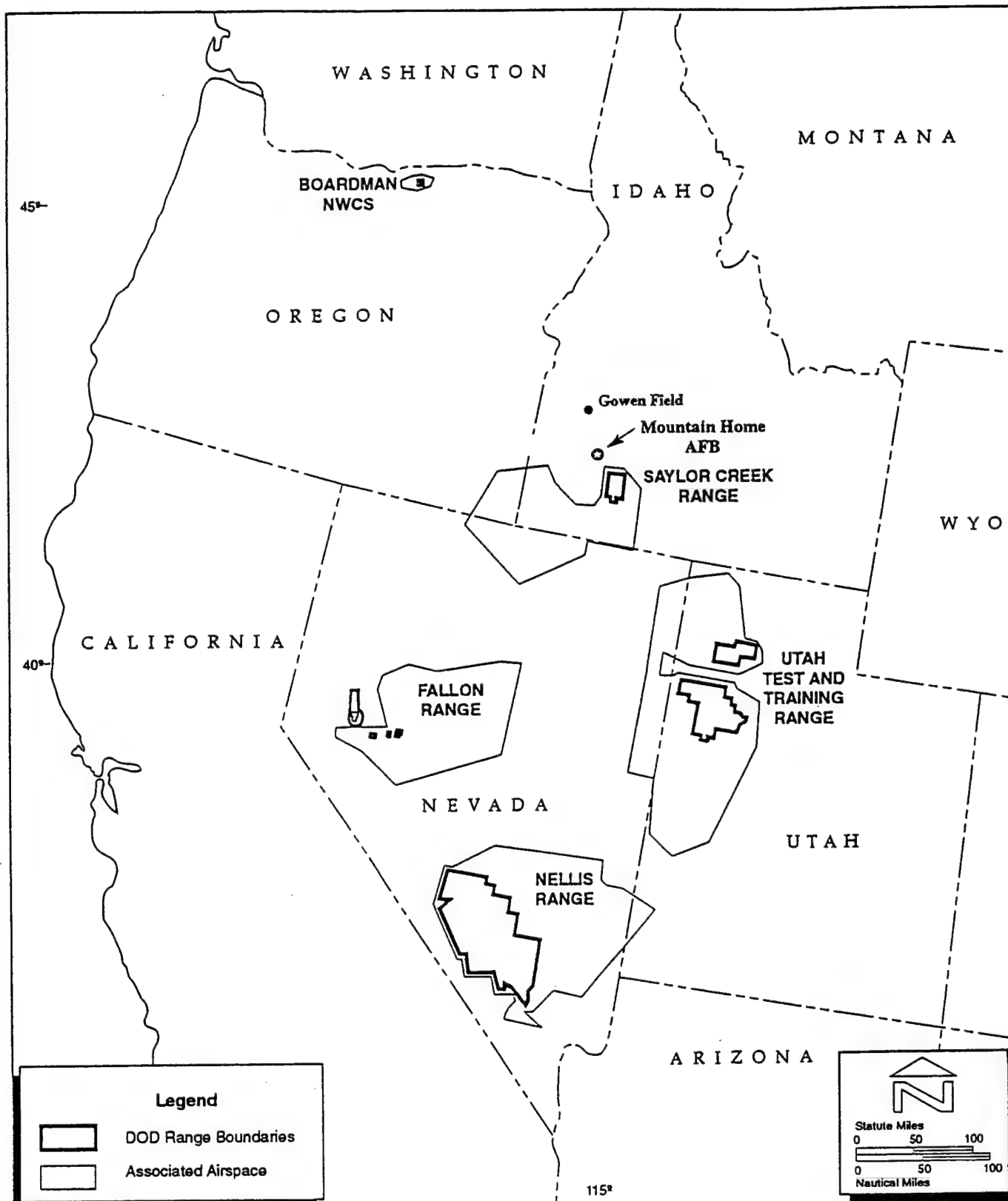
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ALTON CHAVIS
Chief, Environmental Analysis Branch

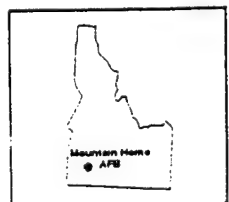
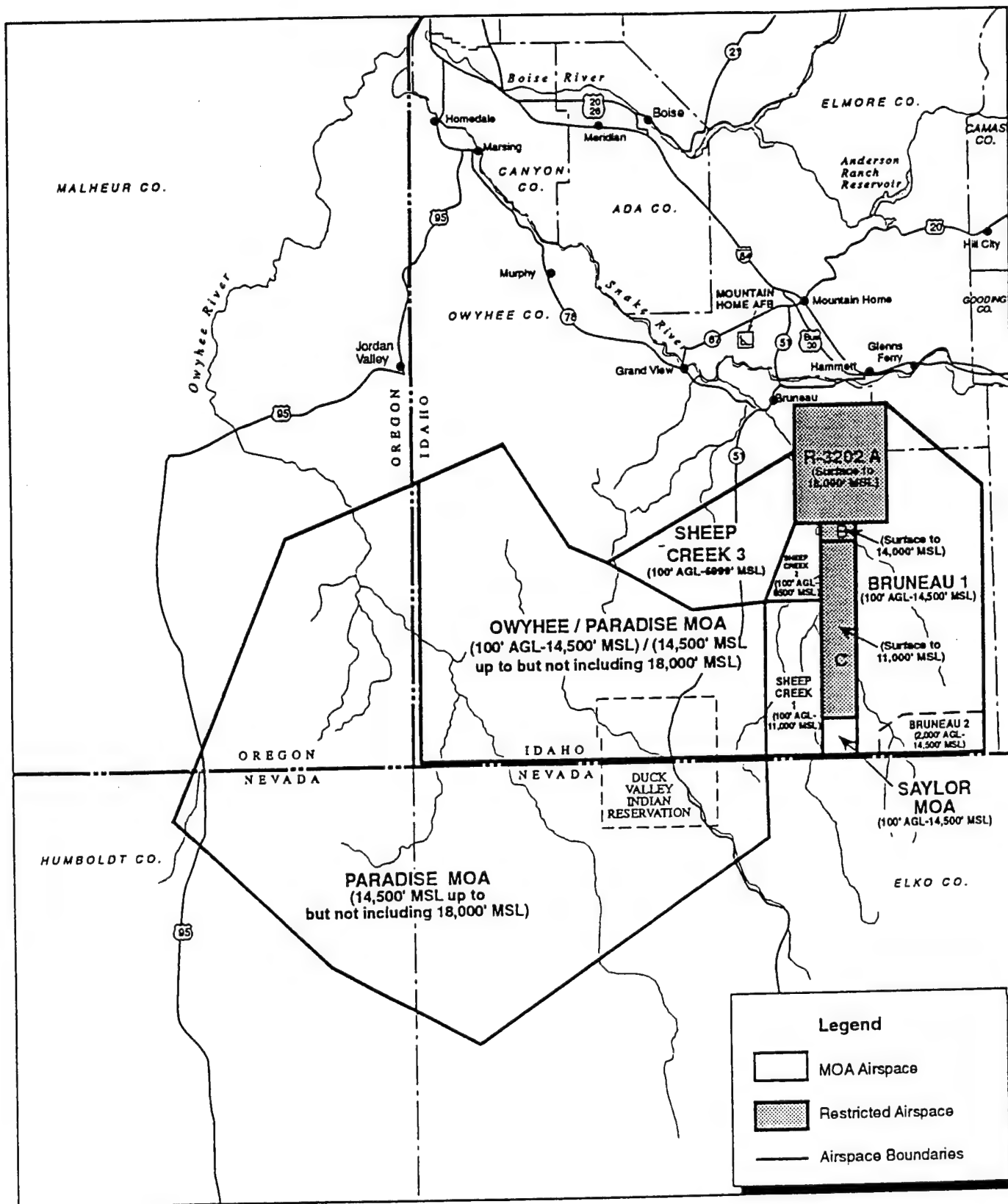
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1. Maps for Area of Interest
2. Legal Descriptions for Affected Lands

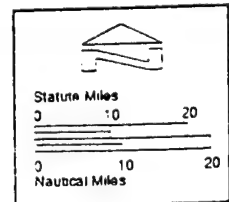
ATTACHMENT 1



LOCATION OF MT HOME AFB AND MHRC

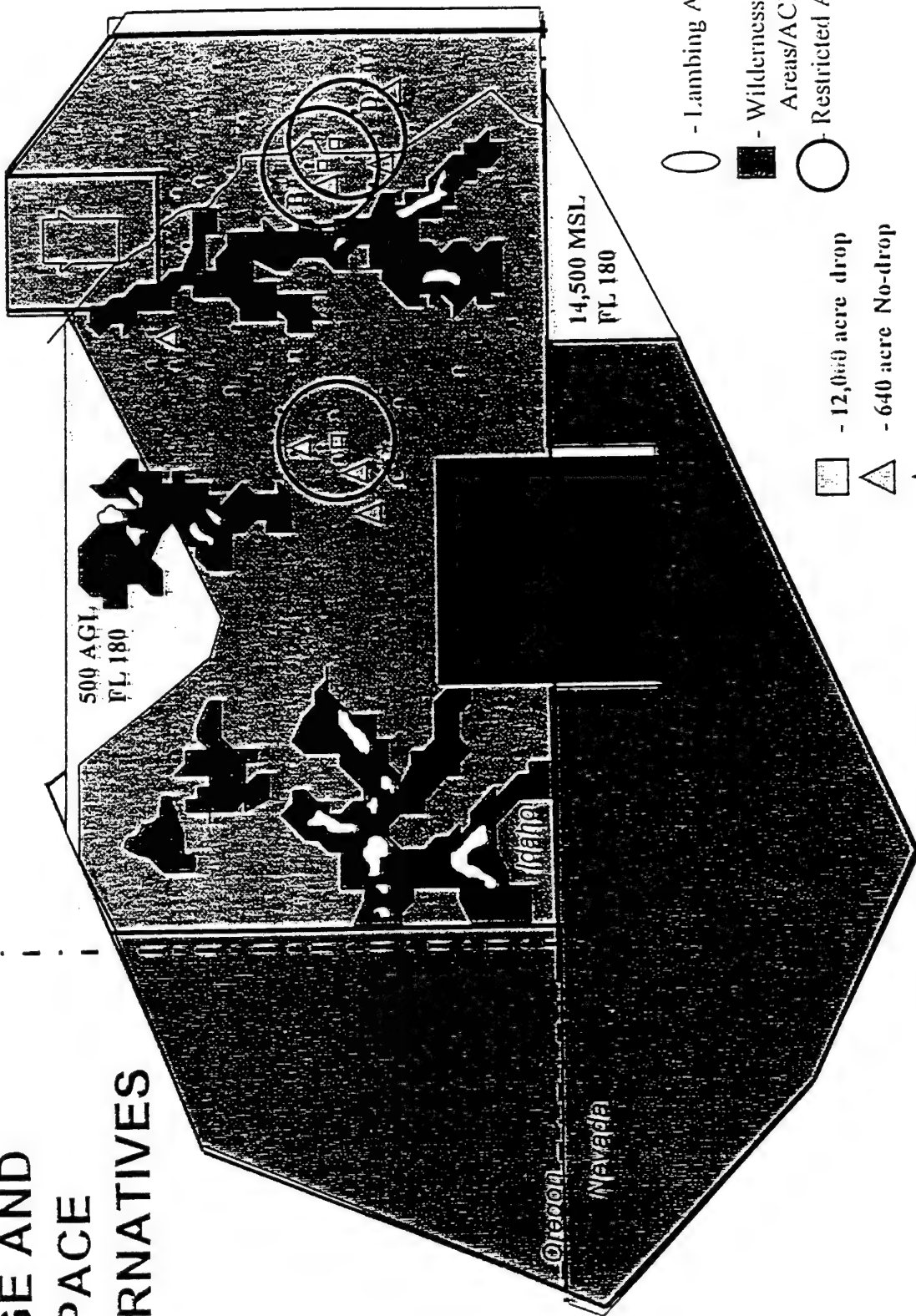


CURRENT AIRSPACE MOUNTAIN HOME AFB RANGE COMPLEX



PROPOSED RANGE AND AIRSPACE ALTERNATIVES

Mountain
Home



- - Lambing Areas
- - Wilderness Study Areas/ACIECs
- - Restricted Airspace

- - 12,000 acre drop
- △ - 640 acre No-drop
- △ - 5 acre No-drop
- - Emitter sites
- ◊ - Airspace modifications

^ Clovo Butte Option

^^ Grassmore Option

^^^ Juniper Butte Option (plus airspace to the Twin Falls County Line)

Note: Only one drop area required.

ATTACHMENT 2

The area of interest under the Paradise MOA in Nevada is in LAT-LONG:

LAT - 41° 15' 00" N
LAT - 42° 00' 00" N
LONG - 115° 20' 00" W
LONG - 118° 00' 00" W

The second area of interest is a proposed airspace expansion directly east of the Paradise MOA. This area in LAT-LONG is:

LAT - 41° 40' 00" N
LAT - 42° 00' 00" N
LONG - 115° 20' 00" W
LONG - 115° 50' 00" W



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
4696 Overland Road, Room 576
Boise, Idaho 83705

October 4, 1996

Alton Chavis
Chief, Environmental Analysis Branch
HQ/ACC/CEVA
Department of the Air Force
Headquarters Air Combat Command
(Attention: Brenda Cook)
129 Andrews Street, Suite 102
Langley Air Force Base, Virginia 23665-2769

Subject: Proposed Air Force Training Range (ETI) Species List Update
SP# 1-4-97-SP-3 File #200.0200

Dear Mr. Chavis:

The U.S. Fish and Wildlife Service (Service) is writing in response to your request of October 1, 1996 for an updated species list for SP #1-4-96-SP-197 for the proposed Air Force Training Range (ETI). There are no additions or changes to the list; the previous list continues to fulfill the requirements of the Service under Section 7(c) of the Endangered Species Act of 1973 (Act), as amended. This officially updates the list as of the date of this letter, and provides you with a new reference number SP #1-4-97-SP-3. You should refer to the new species list number in all subsequent correspondence and documentation.

Information regarding Federal agency obligations under the Act, biological assessments, and candidate species has been provided to you in previous correspondence from this office. If you have further questions, or would like the information sent to you again, please contact Marilyn Hemker of this office at (208) 334-1931.

Thank you for your continued interest in endangered species conservation.

Sincerely,

Susan B. Markin
Acting Supervisor, Snake River Basin Office

cc: IDFG, Nampa



United States Department of the Interior

FISH AND WILDLIFE SERVICE
NEVADA STATE OFFICE
4600 KIETZKE LANE, SUITE 125C
RENO, NEVADA 89502-5055

October 25, 1996
File No. 1-5-97-SP-001

Ms. Brenda Cook
HQ ACC/CEVA
129 Andrews Street, Suite 102
Langley AFB, Virginia 23665-1279

Dear Ms. Cook:

Subject: Species Lists for Paradise Military Operating Areas and Expansion Area
in Nevada for Mountain Home Air Force Base

In response to a letter from Mr. Alton Chavis dated September 27, 1996, enclosed are lists of threatened and candidate species which may be present within the subject areas (Enclosure A1 & A2). To the best of our knowledge, no endangered or proposed species or critical habitat occur within these areas. These lists fulfill the requirement of the Fish and Wildlife Service (Service) to provide information on listed species pursuant to section 7(c) of the Endangered Species Act of 1973, as amended (Act).

Enclosure B provides a discussion of the responsibilities Federal agencies have under section 7 of the Act and the conditions under which a biological assessment must be prepared by the lead Federal agency or its designated non-Federal representative. A list of published references dealing with the distribution, life history, and habitat requirements of the listed species is also included (Enclosure C).

For your consideration, the enclosures also contain lists of other species of concern to the Service that may occur in the subject areas. The Service has used information from the State and other private interests to assess the conservation needs and status of species of concern. Further biological research and field study are needed to resolve their conservation status. One potential benefit of considering these other species of concern is that by exploring alternatives early in the planning process, it may be possible to provide long-term conservation benefits for these species and avoid future conflicts that could otherwise develop. Please note that plant species of concern were included for the expansion area where there might be future surface disturbance, but not the existing military operating area.

Ms. Brenda Cook

File No. 1-5-97-SP-001

We recommend that you contact the Nevada Natural Heritage Program [1550 East College Parkway, Suite 145, Carson City, Nevada 89710, (702) 687-4245] and the appropriate regional office of the Nevada Division of Wildlife, as well as other local, State, and Federal agencies for data on distribution and conservation needs for species of concern. The Nevada Division of Wildlife will also have the specific information requested on transplanted bighorn sheep herds, fawning areas, etc.

Please reference File No. 1-5-97-SP-001 in future correspondence concerning these species lists. If you have any questions, please contact Selena Weldon at (702) 784-5227.

Sincerely,



for Carlos H. Mendoza
State Supervisor

Enclosures

cc:

Fish and Wildlife Biologist/Outreach Coordinator, Snake River Basin Field Office, Columbia Basin Ecoregion, Fish and Wildlife Service, Boise, Idaho (Attn: Ted Koch)
(w/encl. A only)

ENCLOSURE A1

LISTED AND CANDIDATE SPECIES
AND SPECIES OF CONCERN
THAT MAY OCCUR IN THE AREA OF THE
PARADISE MOA - MOUNTAIN HOME AFB RANGE COMPLEX
ELKO AND HUMBOLDT COUNTIES, NEVADA

File Number: 1-5-97-SP-001

Threatened Species

Bird

Bald eagle

Haliaeetus leucocephalus

Fish

Lahontan cutthroat trout

Oncorhynchus clarki henshawi

Candidate Species

Amphibian

Spotted frog

Rana pretiosa

Species of Concern

Mammals

Spotted bat

Euderma maculatum

Small-footed myotis

Myotis ciliolabrum

Long-eared myotis

Myotis evotis

Fringed myotis

Myotis thysanodes

Long-legged myotis

Myotis volans

Pale Townsend's big-eared bat

Plecotus townsendii pallescens

Pacific Townsend's big-eared bat

Plecotus townsendii townsendii

Birds

Northern goshawk

Accipiter gentilis

Western burrowing owl

Athene cunicularia hypugea

Ferruginous hawk

Buteo regalis

Black tern

Chlidonias niger

Fish

Interior redband trout

Oncorhynchus mykiss gibbsi

Invertebrate

Mattoni's blue butterfly

Euphilotes rita mattoni

ENCLOSURE A2

LISTED AND CANDIDATE SPECIES
AND SPECIES OF CONCERN
THAT MAY OCCUR IN THE AREA OF THE
PARADISE MOA EXPANSION AREA -
MOUNTAIN HOME AFB RANGE COMPLEX
ELKO COUNTY, NEVADA

File Number: 1-5-97-SP-001

Threatened Species

Bird

Bald eagle

Haliaeetus leucocephalus

Fish

Lahontan cutthroat trout

Oncorhynchus clarki henshawi

Candidate Species

Fish

Bull trout

Salvelinus confluentus

Amphibian

Spotted frog

Rana pretiosa

Species of Concern

Mammals

Spotted bat

Euderma maculatum

Small-footed myotis

Myotis ciliolabrum

Long-eared myotis

Myotis evotis

Fringed myotis

Myotis thysanodes

Long-legged myotis

Myotis volans

Pale Townsend's big-eared bat

Plecotus townsendii pallescens

Pacific Townsend's big-eared bat

Plecotus townsendii townsendii

Birds

Northern goshawk

Accipiter gentilis

Ferruginous hawk

Buteo regalis

Black tern

Chlidonias niger

Invertebrate

Mattoni's blue butterfly

Euphilotes rita mattoni

Plants

Meadow pussytoes

Antennaria arcuata

Broad fleabane

Erigeron latus

Lewis buckwheat

Eriogonum lewisii

Leiberg clover

Trifolium leibergii

ENCLOSURE B

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7 (a) and (c)
OF THE ENDANGERED SPECIES ACT

SECTION 7 (a): Consultation/Conference

Requires:

- 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;
- 2) Consultation with the Fish and Wildlife Service (Service) when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after determining the action may affect a listed species or critical habitat;
- 3) Conference with the Service when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7 (c): Biological Assessment - Major Construction Activity 1/

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action on listed and proposed species. The process begins with a Federal agency requesting from the Service a list of proposed and listed threatened and endangered species. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the list, the accuracy of the species list should be informally verified with the Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternative to protect endangered species. Planning, design, and administrative actions may proceed; however, no construction may begin.

We recommend the following for inclusion in the BA:

1. An onsite inspection of the area affected by the proposal which may include a detailed survey of the area to determine if the species or suitable habitat are present.
2. A review of literature and scientific data to determine species distribution, habitat needs, and other biological requirements.
3. ¹Interviews with experts, including those within the Service, State conservation departments, universities, and others who may have data not yet published in scientific literature.
4. An analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat.
5. An analysis of alternative actions considered.

6. Documentation of study results, including a discussion of study methods used, any problems encountered, and other relevant information.
- 7 Conclusion as to whether or not a listed or proposed species will be affected.

Upon completion, the BA should be forwarded to our office with a request for consultation, if required.

-
- 1/ A construction project (or other major undertaking having similar physical impacts) is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332 (2) C).

BALD EAGLE, *HALIAEETUS LEUCOCEPHALUS*

- Amadon, D. 1983. The bald eagle and its relatives. Pp. 1-4 In: Biology and management of bald eagles and ospreys. D.M. Bird, ed. Harpell Press, Ste. Anne de Bellevue, Quebec.
- American Ornithologists' Union. 1957. Check-list of North American birds. 5th Ed. Port City Press, Baltimore. 691 pp.
- American Ornithologists' Union. 1983. Check-list of North American birds. 6th Ed. Allen Press, Lawrence, Kansas. 877 pp.
- Anthony, R.G., M.G. Garrett, and C.A. Schuler. 1993. Environmental contaminants in bald eagles in the Columbia River estuary. *Journal Wildlife Management* 57(1): 10-19.
- Bent, A.C. 1938. Life histories of North American birds of prey. Smithsonian Institution, U.S. National Museum, Bulletin No. 170, Washington.
- Bent, A.C. 1961. Life histories of North American birds of prey. Vol. 1. Dover Publ., Inc., New York.
- Bortolotti, G.R. 1984. Physical development of nestling bald eagles with emphasis on the timing of growth events. *Wilson Bull.* 96:525-542.
- Bowerman, IV, W.W., D.A. Best, J.P. Giesy, Jr, T.J. Kubiak, and J.G. Sikarskie. 1994. The influence of environmental contaminants on bald eagle *Haliaeetus leucocephalus* populations in the Laurentian Great Lakes, North America. In: Meyberg, B.U. and R.D. Chancellor (eds.), *Raptor Conservation Today*. WWGBP/The Pica Press: 703-707.
- Brown, S.F., T.M. Brewer, and R. Ridgway. 1905. A history of North American birds. Vol. III. Little Brown And Co., Boston, Massachusetts.
- Brown, L. and D. Amadon. 1968. Eagles, hawks and falcons of the world. Vol. 1. Hamlyn Publishing Group Limited, New York.
- Buehler, D.A., T.J. Mersmann, J.D. Fraser, and Janis K.D. Seegar. 1991. Effects of human activity on bald eagle distribution on the northern Chesapeake Bay. *Journal Wildlife Management* 55(2): 282-290.
- Carson, R.L. 1962. *Silent spring*. Houghton Mifflin Co., New York.
- Coon, N.C., L.N. Locke, E. Cromartie, and W.L. Reichel. 1970. Causes of bald eagle mortality, 1960-1965. *J. Wildl. Dis.* 6:72-76.
- Cromartie, E., et. al. 1975. Residues of organochlorine pesticides and polychlorinated biphenyls

- and autopsy data for bald eagles, 1971-1972. *Pesticides Monitoring Journal*. 9:11-14.
- Driscoll, D.E., R.I. Mesta and J.T. Driscoll. 1993. Population ecology and demography of bald eagles in Arizona: 1991-1993. American Eagle Research Institute, Mesa, Arizona. 74 pp.
- Erskine, A.J. 1968. Encounters between bald eagles and other birds in winter. *Auk* 85:681-683.
- Eyre, L. and D. Paul. 1973. Raptors of Utah. Utah Div, of Wildl. Res., Publ. No. 73-7.
- Garcelon, David K. 1994. Effects of organochlorine contaminants on bald eagle reproduction at Santa Catalina Island. Institute for Wildlife Studies, Arcata, California. 16pp.
- Gerrard, J.M., and G.R. Bortolotti. 1988. The bald eagle: haunts and habits of a wilderness monarch. Smithsonian Institution Press, Washington and London. 177 pp.
- Gerrard, J.M. 1983. A review of the current status of bald eagles in North America. Pp. 5-21 *In*: D.M. Bird (ed.), *Biology and management of bald eagles and ospreys*. 325 pp.
- Gerrard, P., J.M. Gerrard, D.W.A. Whitefield, and W.J. Maher. 1974. Post-fledging movements of juvenile bald eagles. *Blue Jay* 32:218-226.
- Green, N. 1985. The bald eagle, Pp. 508-531 *In*: R.L. DiSilvestro (ed.), *Audubon Wildlife Report*. The Nat. Aud. Soc., New York, New York. 671 pp.
- Grier, J.W. 1982. Ban on DDT and subsequent recovery of reproduction in bald eagles. *Science* 218:1232-1235.
- Grier, J.W. 1980. Modeling approaches to bald eagle population dynamics. *Wildl. Soc. Bull.* 8:316-322.
- Grier, J.W. 1969. Bald eagle behavior and productivity responses to climbing to nest. *J. Wildl. Manage.* 33:961-966.
- Griffin, D.R. and T.S. Baskett. 1985. Food availability and winter range size of immature and adult bald eagles. *J. Wildl. Manage.* 49:592-594.
- Grinnell, J. and A.H. Miller. 1944. The distribution of the birds of California. *Pac. Coast Avifauna* No. 27.
- Grossman, M. L. and J. Hamlet. 1964. *Birds of prey of the world*. Clarkson N. Potter, Inc. New York, New York. 496 pp.

- Hancock, D. 1985. Captive propagation of bald eagles (*Haliaeetus leucocephalus*)- a review, Inter. Zoo Yearbook 13:244-249.
- Hansen, A.J. 1977. Population dynamics and night roost requirements of bald eagles wintering in the Nooksack River Valley, Washington. Huxley College of Environ. Studies, Bellingham, Washington.
- Hayward, C.L., C. Cottam, A.M. Woodbury, and H.H. Frost. 1976. Birds of Utah. Great Basin Naturalist Memoirs 1. 229 pp.
- Haywood, D.D. and R.D. Ohmari. 1983. Preliminary report on habitat utilization by two pairs of breeding bald eagles in Arizona. Pp. 87-94 *In*: D.M. Bird (ed.), Biology and management of bald eagles and ospreys. Harpell Press, Ste. Anne de Bellevue, Quebec.
- Henny, C.J., B. Conant, and D.W. Anderson. 1993. Recent distribution and status of nesting bald eagles in Baja California, Mexico. Journal of Raptor Research 27(4): 203-209.
- Henshaw, H.W. 1876. Report upon ornithological collections made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874. Chapter III *In*: Explorations and surveys west of the one hundredth meridian, Vol. 5., U.S. Army Engineer Dept.
- Herrick, F.H. 1924. Nests and nesting habits of the American eagle. Auk 41:213-231.
- Herrick, F.H. 1934. The American eagle: A study in natural and civil history. D. Appleton-Century Co., New York.
- Herron, G., C. A. Mortimore, M. S. Rawlings. 1985. Nevada raptors: Their biology and management. Nevada Dept. of Wildlife, Reno, Nevada.
- Hickey, J.J. and D.W. Anderson. 1968. Chlorinated hydrocarbons and eggshell changes in raptorial and fish-eating birds. Science 162:271-273.
- Hunt, W.G., D.E. Driscoll, E.W. Bianchi, and R.E. Jackman. 1992. Ecology of bald eagles in Arizona. Report to U.S. Bureau of Reclamation, Contract 6-CS-30-04470. Biosystems Analysis, Inc., Santa Cruz, California.
- Jacobsen, E., J. W. Carpenter, and M. Norilla. 1977. Suspected lead toxicosis in a bald eagle. J. American Veterinarian Medicine Assoc. 171: 952-954.
- Jenks, R. and J.O. Stevenson. 1937. Bird records from central-eastern Arizona. Condor 39:87.

- Kaiser, T. E., et al. 1980. Organo-chlorine pesticide, PCB, and PBB residues and necropsy data for bald eagles from 29 states, 1975-1977. *Pesticides Monitoring Journal* 13: 145-149.
- Keister, G.P. and R.G. Anthony. 1983. Characteristics of winter roosts and populations of bald eagles in the Klamath Basin of Oregon and California. Pp. 95-100 *In*: D.M. Bird (ed.), *Biology and management of bald eagles and ospreys*. Harpell Press, Ste, Anne de Bellevue, Quebec.
- Laycock, G. 1973. Saving western eagles from traps and zaps. *Audubon* 75(5):133.
- LeFranc, M.N., Jr. and B.A. Millsap. 1984. A summary of state and federal agency raptor management programs. *Wildl. Soc. Bull.* 12:274-282.
- Lincer, J.L., W.S. Clark, and M.N. LeFranc, Jr. 1979. Working bibliography of the bald eagle. *Natl. Wildl. Fed. Sci. and Tech. Series. No. 2*. Washington. 217 pp + Appendix.
- Linsdale, J.M. 1936. The birds of Nevada. *Pac. Coast Avifauna No. 23*, 145 pp.
- Mabie, D.W., M.T. Merendino, and D.H. Reid. 1994. Dispersal of bald eagles fledged in Texas. *Journal of Raptor Research* 28(4): 213-219.
- Malheur, B. M., et al. 1970. Organo-chlorine residues and autopsy data from bald eagles, 1966-1968. *Pesticides Monitoring Journal* 4: 141-144.
- McEwan, L.C. and D.H. Hirth. 1979. Southern bald eagle productivity and nest site selection. *J. Wildl. Manage.* 43:585-594.
- Mearns, E.A. 1890. Observations of avifauna of portions of Arizona. *Auk* 7:45-55.
- Mengel, R.M. 1953. On the name of the northern bald eagle and the identity of Audubon's gigantic "bird of Washington." *Wilson Bull.* 65:145-151.
- Millsap, B.A. 1986. Results of the National Wildlife Federation mid-winter bald eagle survey. 1979-1982. *Nat. Wildl. Fed., Raptor Info. Cen.* 38 pp.
- Murphy, J.R. 1965. Nest site selection by the bald eagle in Yellowstone National Park. *Utah Acad. Proc.* 42:261-264.
- National Audubon Society. 1973. The endangered bald eagle. *Natl. Audubon Soc.*, New York.
- National Wildlife Federation. 1982. Midwinter bald eagle survey data. On file at: *Nat. Wildl. Fed.*, Washington D.C.

- Newton, I. 1977. Breeding strategies in birds of prey. *Living Bird* 16:51-82.
- Nickerson, P.R. 1989. Bald eagle status report. Proceedings of northeast raptor management symposium and workshop. National Wildlife Federation, Washington. Pp. 30-36.
- Nye, P.E. 1983. A biological and economic review of the hacking process for the restoration of bald eagles. Pp. 127-135 *In*: D.M. Bird (ed.), *Biology and management of bald eagles and ospreys*. Harpell Press, Ste. Anne de Bellevue, Quebec.
- Olendorff, R. R., A. D. Miller, and R. N. Lehman. 1981. Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1981. Raptor Research Foundation Inc., Research Report No. 4. 111 pp.
- Page, D. A. and M. G. Miller. 1981. Essential wintering bald eagle habitat, Elko District, Wells Resource Area. U.S. Bureau of Land Management, Elko, Nevada. 29 pp.
- Peakall, D.B. 1975. Physiological effects of chlorinated hydrocarbons on avian species. Pp. 343-360. *In*: R. Hague and V.H. Freed (eds.), *Symposium on environmental dynamics of pesticides*. Plenum Press, New York.
- Phillips, A., J. Marshall, and G. Nanson. 1964. *The birds of Arizona*, Univ, Ariz. Press., Tucson, Arizona, 212 pp.
- Ryser, F., Jr. 1985. *Birds of the Great Basin: A natural history*. University of Nevada Press, Reno. 604 pp.
- Sherrod, S.K. 1978. Diets of North American Falconiformes. *Raptor Res.* 12:49-121.
- Smith, F.R. 1936. The food and nesting habits of the bald eagle. *Auk* 53:301-305.
- Snyder, N.F.R. and J.W. Wiley. 1976. Sexual size dimorphism in hawks and owls of North America. *Ornithol. Monogr.* No. 20.
- Southern, W.E. 1964. Additional observations on winter bald eagle populations: Including remarks on biotelemetry techniques and immature plumages. *Wilson Bull.* 76:121-137.
- Spencer, D.A. 1976. Wintering of the migrant bald eagle in the lower 48 states. *Natl. Agric. Chem. Assoc.*, Washington, D.C.
- Stalmaster, M.V. 1989. Effects of recreational activity on wintering bald eagles on the Skagit wild and scenic river system, Washington. Technical Report U.S. Forest Service. 15 pp.

- Stalmaster, M.V. and J.A. Gessman. 1984. Ecological energetics and foraging behavior of over-wintering bald eagles. *Ecol. Monogr.* 54:407-428.
- Stalmaster, M.V. and J.R. Newman. 1978. Behavioral responses of wintering bald eagles to human activity. *J. Wildl. Manage.* 42:506-513.
- Steenhof, K. 1978. Management of wintering bald eagles. U. S. Fish and Wildlife Service, Biological Services Program FWS/OBS-78-79. Contract No. 14-16-0006-77-030.
- Tilt, W.C. 1977. Status of the bald eagle (*Haliaeetus leucocephalus*) in the conterminous United States. Hampshire College, Amherst, Mass.
- U.S. Fish and Wildlife Service. 1992. The potential effects of Rocky Mountain Arsenal clean-up and Denver Metropolitan Transportation development on bald eagles. Final Study Report. Rocky Mountain Arsenal, Commerce City, Colorado. 148 pp.
- U.S. Fish and Wildlife Service. 1990. Chesapeake Bay region bald eagle recovery plan: First revision. U.S. Fish and Wildlife Service, Hadley, Massachusetts. 80 pp.
- U.S. Fish and Wildlife Service. 1989. Endangered and threatened wildlife and plants. 50 CFR 17.11 & 17.12.
- U.S. Fish and Wildlife Service. 1989. Southeastern states region bald eagle recovery plan. First revision. U.S. Fish and Wildlife Service, Atlanta, Georgia. 41 pp + App.
- U. S. Fish and Wildlife Service. 1986. Pacific bald eagle recovery plan. U. S. Fish and Wildlife Service, Portland, Oregon. 160 pp.
- U.S. Fish and Wildlife Service. 1986. Recovery Plan for the Pacific bald eagle. U.S. Fish and Wildl. Serv., Portland, OR. 66 pp.
- U.S. Fish and Wildlife Service. 1985. Draft supplemental environmental impact statement on the use of lead shot for hunting migratory birds in the United States. U.S. Department of the Interior, U.S. Fish and Wildlife Service, Washington, D.C.
- U.S. Department of Interior. 1985. Species present on native American lands, data table, Region I. 3 pp.
- U.S. Fish and Wildlife Service. 1984. Endangered and threatened species on National Wildlife Refuges. Refuge Mngmt. Info. System Data tables, fiscal years 1983, 27 pp.; 1984, 29 pp.
- U.S. Fish and Wildlife Service. 1983. Northern states regional bald eagle recovery plan. U.S. Fish and Wildlife Service, Twin Cities, Minnesota. 76 pp.

- U.S. Fish and Wildlife Service. 1982. Southwestern bald eagle recovery plan. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 74 pp.
- Wiemeyer, S. N., C.M.Bunck, and C.J. Stafford. 1993. Environmental contaminants in bald eagle eggs--1980-84--and further interpretations of relationships to productivity and shell thickness. Archives Environmental Contamination and Toxicology 24: 213-227.
- Wiemeyer, S.N., et.al.1972. Residues of organochlorine pesticides, polychlorinated biphenyls, and mercury in bald eagle eggs and changes in shell thickness, 1969 and 1970. Pestic. Monit. J. 6:50-55.
- Worthington, V.1976. Power line electrocution-hazards made safer. Conserv. News 41(21):8-10.
- Wright, B.S.1953. The relation of bald eagles to breeding ducks. J. Wildl. Manage. 17:55-62.

Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*)

References

Updated August 17, 1992

- Allendorf, F.W., and R.F. Leary. 1988. Conservation and distribution of genetic variation in a polytypic species, the cutthroat trout. *Conservation Biology* 2(2):170-184.
- Bartley, D.M., and G.A.E. Gall. 1989. Biochemical genetic analysis of native trout populations in Nevada, report on populations collected from 1976-1988. University of California, Davis. 27pp.
- Behnke, R.J. 1979. Monograph of the native trouts of the genus *Salmo* of western North America. U.S. Department of Agriculture, Forest Service, Lakewood, Colorado. 215 pp.
- Behnke, R. J. 1981. Systematic and zoogeographical interpretation of Great Basin trouts. Pages 95-124 in R.J. Naiman and D.L. Soltz, editors. *Fishes in North American Deserts*. Wiley-Interscience, John Wiley & Sons, New York.
- Behnke, R.J., and Zarn, M. 1976. Biology and management of threatened and endangered western trouts. U.S. Department of Agriculture, Forest Service General Technical Report RM-28. 45pp.
- Buchanan, C.C. 1987. Pyramid Lake inflow required for cui-ui and Lahontan cutthroat trout. U.S. Department of the Interior, Fish and Wildlife Service. Reno, Nevada. 18pp.
- Calhoun, A.J. 1942. The biology of the black-spotted trout (*Salmo clarki henshawi*) (Gill and Jordan) in two Sierra Nevada lakes. Ph.D. dissertation. Stanford University, Palo Alto, California. 218 pp.
- Coffin, P.D. 1981. Distribution and life history of the Lahontan/Humboldt cutthroat trout, Humboldt River drainage basin. Nevada Department of Wildlife, Reno, Nevada. 69pp.
- Coffin, P.D. 1982. Northeastern Nevada stream and riparian habitat improvement projects. Unpublished. Nevada Department of Wildlife, Reno, Nevada. 7pp.
- Coffin, P.D. 1983. Lahontan cutthroat trout fishery management plan for the Humboldt River basin. Federal Aid to Fish Restoration project report F-20-17, Study IX, Job No. 1-P-1. Nevada Department of Wildlife, Reno, Nevada. 33pp.
- Coffin, P.D. 1988. Nevada's native salmonid program status, distribution, and management. Nevada Department of Wildlife, Reno, Nevada. 40pp.
- Coleman, M.E., and V.K. Johnson. 1988. Summary of trout management at Pyramid Lake, Nevada, with emphasis on Lahontan cutthroat trout, 1954 - 1987. American Fisheries Society Symposium 4:107-115.
- Cowan, W. 1983. Annual fisheries management report FY-83', Summit Lake Indian Reservation, Humboldt County, Nevada. Unpublished report. Summit Lake Paiute Tribe, Winnemucca, Nevada. 37pp.

Lahontan cutthroat trout (Continued)

- Cowan, W. 1988. Biochemical genetics of Lahontan cutthroat trout (*Salmo clarki henshawi*) inhabiting the Summit Lake drainage basin, Humboldt County, Nevada. In fulfillment of a senior project, Humboldt State University, Arcata, California. 37pp.
- Cowan, W. 1991. Fisheries management services contract #CTH61T65501 annual report, fiscal year 1990. Unpublished manuscript, Summit Lake Paiute Tribe, Winnemucca, Nevada. 79pp.
- Cowan, W. 1991a. An investigation of the distribution and abundance of Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) inhabiting Mahogany Creek and Summer Camp Creek, Humboldt County, Nevada, August - September, 1990. Unpublished manuscript, Summit Lake Paiute Tribe, Winnemucca, Nevada. 8pp.
- Ferjancic, K.P. 1978. Pyramid Lake comprehensive management plan. Pyramid Lake Indian Tribal Enterprises, Sutcliffe, Nevada. 47 pp.
- French, J., and J. Curran. 1991. DRAFT Lahontan cutthroat trout fishery management plan for the Quinn River drainage basin. Nevada Department of Wildlife, Reno, Nevada. 46 pp.
- Gall, G.A.E. and E.J. Loudenslager. 1981. Biochemical genetics and systematics of Nevada trout populations. Fisheries Biology Research Facility, Department of Animal Science, University of California, Davis, California. 53 pp.
- Garcia, J.C. 1990. A Review of the Lahontan cutthroat trout biology, status and management with regards to the Mary's River population in the Humboldt Basin. BioSystems Analysis, Inc., Tiburon, California. 18pp.
- Gerstung, E.R. 1986. A management plan for Lahontan cutthroat trout populations in California. Inland Fisheries Branch, California Department of Fish and Game, Sacramento, California. 54 pp.
- Gerstung, E.R. 1988. Status, life history, and management of the Lahontan cutthroat trout. American Fisheries Society Symposium 4:93-106.
- Hickman, T.J. 1978. Fisheries investigations in the Pilot Peak Mountain Range Utah-Nevada 1977. Contract No. UT-910-PH7-822. U.S. Department of the Interior, Bureau of Land Management. 18 pp.
- Hickman, T. and R.F. Raleigh. 1982. Habitat suitability index models: cutthroat trout. U.S. Fish and Wildlife Service. FWS/OBS-82/10.5. 39 pp.
- Hubbs, C.L., and R.R. Miller. 1948. The zoological evidence: correlation between fish distribution and hydrographic history of the desert basins of western United States. Bulletin of the University of Utah 38(20):17-166.

Lahontan cutthroat trout (Continued)

- Johnson, G., D. Bennett, and T. Bjornn. 1983. Juvenile emigration of Lahontan cutthroat trout in the Truckee River / Pyramid Lake system. Pages 90 - 175 in Restoration of a Reproductive Population of Lahontan Cutthroat Trout (*Salmo clarki henshawi*) to the Truckee River / Pyramid Lake System. Special Report. U.S. Department of the Interior, Fish and Wildlife Service, Great Basin Complex Office, Reno, Nevada.
- Juday, C. 1907. Notes on Lake Tahoe, its trout and trout-fishing. Bulletin of the Bureau of Fisheries (U.S. Department of Commerce and Labor) 26(1906):133-146.
- Knoll, J., D.L. Koch, R. Knoll, J. Sommer, L. Hoffman, and S. Lintz. 1979. Physiological adaptations of salmonid fishes (*Salmo clarki henshawi*, *Salmo gairdneri*, and *Oncorhynchus kisutch*) to alkaline saline waters and their toxic effects. Desert Research Institute, Bioresources Center Publication 50009, Reno, Nevada.
- Koch, D.L., J.J. Cooper, E.L. Lider, R.L. Jacobson, and R.J. Spencer. 1979. Investigations of Walker Lake, Nevada: dynamic ecological relationships. Desert Research Center, University of Nevada, Reno. 191 pp.
- La Rivers, I. 1962. Fishes and fisheries of Nevada. Nevada State Fish and Game Commission, Reno, Nevada. 782 pp.
- Layton, R., V.K. Johnson, and D.V. Lockard. 1974. Emigration and nursery evaluation of the lower Truckee River, Nevada, relative to Lahontan cutthroat trout fry. Nevada Department of Wildlife, Reno, Nevada.
- Lea, T. N. 1968. Ecology of the Lahontan cutthroat trout, *Salmo clarki henshawi*, in Independence Lake, California. Master's thesis. University of California, Berkeley. 95 pp.
- Leary, R.F., F.W. Allendorf, S.R. Phelps, and K.L. Knudsen. 1987. Genetic divergence among seven subspecies of cutthroat trout and rainbow trout. Transactions of the American Fisheries Society 116:580-587.
- Loudenslager, E.J., and G.A.E. Gall. 1980. Geographic patterns of protein variation and subspeciation in cutthroat trout, *Salmo clarki*. Systematic Zoology 29:27-42.
- McAfee, W.R. 1966. Lahontan cutthroat trout. Pages 225-231 in A. Calhoun, editor. Inland Fisheries management. California Department of Fish and Game, Sacramento, California.
- McBrayer, J.W. and R.D. Ringo. 1975. Egg and alevin survival and general spawning conditions for Lahontan cutthroat trout in the lower Truckee River during 1974. Unpublished report. U.S. Fish and Wildlife Service, Reno, Nevada. 23 pp.
- Moyle, P.B. 1976. Inland Fishes of California. University of California Press, Berkeley, California. 405 pp.

Lahontan cutthroat trout (Continued)

- Platts, W.S. and R.L. Nelson. 1983. Population fluctuations and generic differentiation in the Humboldt cutthroat trout of Gance Creek, Nevada. Transactions of the Cal-Neva Chapter of the American Fisheries Society 1983: 15-20.
- Platts, W.S. and R.L. Nelson. 1988. Fluctuations in trout populations and their implications for land-use evaluation. North American Journal of Fisheries Management 8: 333-345.
- Rankel, G.L. 1976. Fishery management program, Summit Lake Indian reservation, Humboldt County, Nevada. Special Report of the U.S. Fish and Wildlife Service, Division of Fishery Services, Reno, Nevada. 35pp.
- Ringo, R.D. 1975. A survey of Truckee River fish passage problems with emphasis on Lahontan cutthroat trout. U.S. Fish and Wildlife Service, Reno, Nevada. 18 pp.
- Sada, D.W. 1984. A status review of the Lahontan cutthroat trout (*Salmo clarki henshawi*), a listed threatened species. Unpublished manuscript. U.S. Fish and Wildlife Service, Reno, Nevada. 33pp.
- Sevon, M. 1988. Walker Lake fisheries management plan. Nevada Department of Wildlife, Reno, Nevada. 79pp.
- Sigler, W.F., W.T. Helm, P.A. Kucera, S. Vigg, and G.W. Workman. 1983. Life history of the Lahontan cutthroat trout, *Salmo clarki henshawi*, in Pyramid Lake, Nevada. Great Basin Naturalist 43:1-29.
- Sigler, W.F. and J.W. Sigler. 1987. Fishes of the Great Basin - a natural history. University of Nevada Press, Reno, Nevada. 425pp.
- Smith, G.R. 1978. Biogeography of intermountain fishes. Pages 17-42 in K.T. Harper and J.L. Reveal, editors. Intermountain biogeography: A symposium. Great Basin Naturalist Memoirs 2. Brigham Young University, Provo, Utah.
- Snyder, J.O. 1917. The fishes of the Lahontan system of Nevada and northeastern California. United States Bureau of Fisheries Bulletin (1915-1916)35: 31-86.
- Summer, F.H. 1939. The decline of the Pyramid Lake fishery. Transactions of the American Fisheries Society 69:215-224.
- Taylor, R.E.L. 1972. The effects of increasing salinity on the Pyramid Lake fishery. Agriculture Experiment Station, University of Nevada, Reno, Nevada. 8 pp.
- Townley, J.M. 1980. The Truckee River fishery, 1844-1944. Desert Research Institute, Water Resources Center, Publication Number 43008. University of Nevada System, Reno, Nevada. 88pp.

Lahontan cutthroat trout (Continued)

- Trotter, P. C. 1987. Cutthroat, native trout of the west. Colorado Associated University Press. Boulder, Colorado. 219 pp.
- U.S. Fish and Wildlife Service. 1967. Survival of hatchery reared Lahontan cutthroat trout in the lower Truckee River during the summer of 1966. U.S. Fish and Wildlife Service, Sacramento, California.
- U.S. Fish and Wildlife Service. 1977. Fisheries Management Plan - Summit Lake Indian Reservation. U.S. Department of the Interior, Fish and Wildlife Service, Reno, Nevada. 38pp.
- U.S. Fish and Wildlife Service. 1983. Restoration of a reproductive population of Lahontan cutthroat trout (*Salmo clarki henshawi*) to the Truckee River/Pyramid Lake system. Special Report. U.S. Department of the Interior, Fish and Wildlife Service, Great Basin Complex Office, Reno, Nevada. 232 pp.
- U.S. Fish and Wildlife Service. 1985. Relation of instream flow to Cui-ui and cutthroat trout habitat in the lower Truckee River. U.S. Fish and Wildlife Service, Reno, Nevada. 67 pp.
- Vigg, S. 1983. Limnological survey of Summit Lake, Nevada. Unpublished report. Desert Research Institute, Bioresources Center, University of Nevada, Reno, Nevada. 45pp.
- Vigg, S. and D.L. Koch. 1980. Upper lethal temperature range of Lahontan cutthroat trout in waters of different ionic concentration. Transactions of the American Fisheries Society 109:336-339.
- Welch, W.R. 1929. Trout fishing in California today and fifty years ago. California Fish and Game 15:20-22.
- Wheeler, S.S. 1974. The desert lake. Caxton Printers, Caldwell, Idaho. 133 pp.
- Williams, R.N. 1991. Genetic analysis and taxonomic status of cutthroat trout from Willow Creek and Whitehorse Creek in southeastern Oregon. Boise State University. BSU Evolutionary Genetics Lab Report 91-3. 15pp.
- Wolcott, R.S., Jr. 1978. Evaluation of the 1978 Lahontan cutthroat trout run to the Pyramid Lake fishway and comparison with past years. Unpublished manuscript. U.S. Fish and Wildlife Service, Reno, Nevada. 30 pp.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

12 6 JUN 1996

MEMORANDUM FOR Idaho Department of Fish and Game
Mr. Lou Nelson, Region III Wildlife Manager
3101 South Powerline Road
Nampa ID 83686

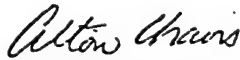
FROM: HQ ACC CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2969

SUBJECT: Enhanced Training in Idaho

1. As you are aware, we are preparing an Environmental Impact Statement (EIS) addressing the establishment of a tactical training range in the eastern Owyhee County ID. Attachment 1 depicts the current Military Operating Areas (MOA) over southwestern Idaho and the proposed airspace modifications under the Enhanced Training in Idaho proposal. In attempt to gather the most relevant and current information available on threatened, endangered, candidate and sensitive species which occur or have the potential to occur in the area of the proposed Enhanced Training in Idaho located in eastern Owyhee County, ID (see Attachment 2), we have made requests for species lists and distribution maps to the Jarbidge Resource Area, the Idaho Conservation Data Center and the Snake River Basin Office of the U.S. Fish and Wildlife Service. Each agency has largely responded quickly and provided the Air Force or our contractor personnel with valuable information. For example, Mr. Jim Klott of BLM's Jarbidge Resource Area, provided maps with locations of raptor nest sites, sage grouse leks and rare plants.

2. To thoroughly analyze potential issues associated with the proposed training range, the Air Force is also requesting information from the Region 3 and 4 offices concerning sensitive biological resource that occur or may occur in the area of the proposed training range. Specifically, information on California bighorn sheep distribution and population levels, distribution and breeding habitat for sensitive bat species, active and historic sage grouse lek sites and known raptor nest sites and foraging territories. In addition, please identify other sensitive biological resources (e.g., pronghorn wintering and fawning areas, key bird migratory routes, herptile hibernacula, etc) that occur or may occur in eastern Owyhee county. Please send to the above address or you may fax it to (804) 764-5339.

3. If you have any questions regarding this correspondence or require additional information, please contact Ms. Brenda Cook at (804) 764-6197 or Dr. Ted Doerr, Science Applications International Corporation at (505) 842-7845. Thank you for your assistance in this matter.


ALTON CHAVIS
Chief, Environmental Analysis Branch

Attachment:

1. Maps for Area of Interest
2. Legal Descriptions of Affected Lands



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

26 JUN 1996

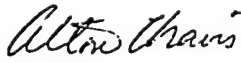
MEMORANDUM FOR Idaho Department of Fish and Game
Natural Resources Bureau
Dr. Dale Toweill, Wildlife Program Coordinator
600 South Walnut Street
P.O. Box 25
Boise ID 83707

FROM: HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2969

SUBJECT: Enhanced Training in Idaho

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3. If you have any questions regarding this correspondence or require additional information, please contact Ms. Brenda Cook at (804) 764-6197 or Dr. Ted Doerr, Science Applications International Corporation at (505) 842-7845. Thank you for your assistance in this matter.


ALTON CHAVIS
Chief, Environmental Analysis Branch

Attachment:

1. Maps for Area of Interest
2. Legal Descriptions of Affected Lands



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

20 AUG 1986

MEMORANDUM FOR Idaho State Historic Preservation Officer

Mr. John R. Hill
210 Main Street
Boise ID 83702

FROM: HQ ACC/CEVA

129 Andrews St, Suite 102
Langley AFB VA 23665-2969

SUBJECT: Enhanced Training in Idaho

1. The United States Air Force's Air Combat Command is proposing a new training range in southern Idaho to augment the existing Saylor Creek Range and the surrounding airspace. The proposed Enhanced Training in Idaho (ETI) project would provide high-quality, realistic training for aircraft based at Mountain Home Air Force Base. The proposed action includes development and use of a 12,000-acre tactical training range, five simulated (no drop) target areas, and a set of 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County. Establishment of a proposed range would also involve modification to the current airspace structure. To develop the proposed range and other smaller training sites would require the withdrawal of lands currently managed by the Bureau of Land Management (BLM) and the leasing of some state lands. As part of the potential construction, maintenance and operations of the training range, possible effects to cultural resources could occur through use of training ordnance delivery, road construction and improvement, fire suppression activities and construction of facilities. Improved access to the area could also lead to an increase in vandalism. As part of the environmental analysis process, we are currently completing the identification efforts as designed in consultation with the State Historic Preservation Officer. Upon selection of a preferred alternative, the entirety of the tactical training range area will undergo additional identification efforts prior to any disturbance.
2. The proposed undertaking could have an adverse effect on historic properties. In order to comply with Section 106 of the National Historic Preservation Act and 36 CFR 800.4 - 800.5, the U.S. Air Force wishes to formally consult on measures to reduce, avoid, or mitigate adverse effects to historic properties located in the area of the proposed undertaking.
3. We look forward to working with you as the project progresses. If you have any questions concerning our compliance with the National Historical Preservation Act for the ETI or need any additional information, please contact Dr. Paul Green or Ms. Brenda Cook, at (804) 764-6197.

Alton Chavis

ALTON CHAVIS
Chief, Environmental Analysis Branch

cc: BLM (Mr. Jon Foster)
Advisory Council on Historic Preservation
Shoshone-Pauite Tribe (Chairman Pavia)
State of Idaho (Mr. Dave Jett)
HQ AF/XOOA
366 WG/DS
366 CES/CEV
HQ ACC/DOR

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

19 DEC 1996

HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2769

Mr. Ronald James, SHPO
Supervisor
Division of Historic Preservation and Archaeology
123 West Nye Lane, Room 208
Carson City, Nevada 89710

Dear Mr. James

The purpose of this letter is to notify you that the United States Air Force's Air Combat Command (ACC) is in the process of preparing an Environmental Impact Statement (EIS) addressing the Enhanced Training in Idaho (ETI) proposal. The Air Force is producing this EIS in compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality regulations implementing NEPA, the Federal Land Policy and Management Act (FLPMA), Air Force Instruction 32-7061, and other applicable federal and state-delegated environmental legislation. With this letter we are also soliciting your specific concerns about the proposal.

The Air Force proposes the ETI project to provide high-quality composite wing training for the 366th Wing near Mountain Home Air Force Base, Idaho. This proposal would construct a 12,000-acre tactical training range, 5 simulated target areas, and a series of 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County. The current airspace structure would also be modified by this proposal, including airspace overlying parts of Elko and Humboldt Counties, Nevada, and Malheur County, Oregon.

The proposed action and alternatives would create changes in the existing Paradise West and Paradise East Military Operating Areas (MOA) overlying Nevada. These MOAs have existed and have been used for more than a decade. The first of these changes would involve variations in the configuration and number of sorties within the existing airspace of both MOAs, although no changes to the types of aircraft activities would occur. The ETI proposal does not include an increase in the number of supersonic flights within the existing airspace. The second change consists of an expansion of the eastern boundary of the Paradise East MOA which would overlie an additional 80,601 acres in Elko County. This additional high-altitude airspace would start at 14,500 feet above mean sea level, the same as the existing Paradise East MOA. There would be no ground disturbance under the affected airspace in Elko or Humboldt Counties. The accompanying map indicates the extent of the existing airspace and the proposed addition in Nevada.

We have contacted the Nevada State Historical Society, the Bureau of Land Management, and Forest Service to conduct records searches for archaeological sites and National Register properties in the portions of Elko and Humboldt Counties underlying the applicable airspace.

Global Power For America

If you have any specific concerns about the ETI proposal, we would like to hear from you. Please contact Brenda Cook at the following address:

HQ ACC/CEVA
Attention: Brenda Cook
129 Andrews Street, Suite 102
Langley AFB VA 23665-5542
(757) 764-6197

You may also contact Science Applications International Corporation (SAIC), the Air Force's contractor:

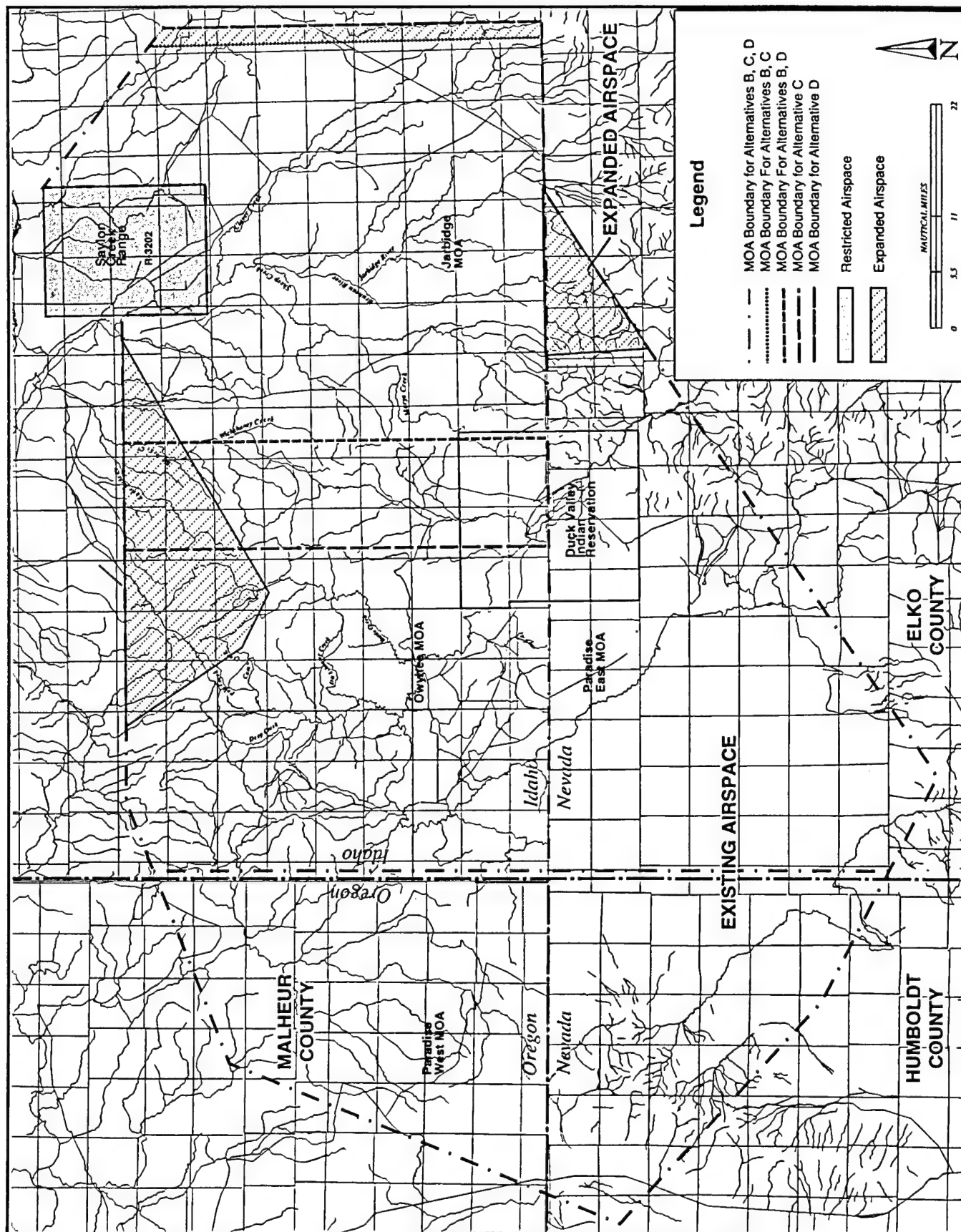
Science Applications International Corporation
Attention: Jim Rudolph
405 South 8th Street, Suite 301
Boise, Idaho 83702
(208) 344-5001

Sincerely

A handwritten signature in black ink, appearing to read "David L. Shifflett", written in a cursive style.

DAVID L. SHIFFLETT
Acting Chief, Environmental Analysis Branch

Attachment:
Map



Project Components - Airspace



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

19 DEC 1996

HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2769

Mr. Robert Meinen, SHPO
State Historic Preservation Office
1115 Commercial NE
Salem, Oregon 97310-1001

Dear Mr. Meinen

The purpose of this letter is to notify you that the United States Air Force's Air Combat Command (ACC) is in the process of preparing an Environmental Impact Statement (EIS) addressing the Enhanced Training in Idaho (ETI) proposal. The Air Force is producing this EIS in compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality regulations implementing NEPA, the Federal Land Policy and Management Act (FLPMA), Air Force Instruction 32-7061, and other applicable federal and state-delegated environmental legislation. With this letter we are also soliciting your specific concerns about the proposal.

The Air Force proposes the ETI project to provide high-quality composite wing training for the 366th Wing near Mountain Home Air Force Base, Idaho. This proposal would construct a 12,000-acre tactical training range, 5 simulated target areas, and a series of 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County. The current airspace structure would also be modified by this proposal, including airspace overlying parts of Malheur County, Oregon, and Elko and Humboldt Counties, Nevada.

The proposed action and alternatives would create changes in the Paradise West Military Operating Area (MOA) overlying Oregon. This MOA has existed and has been used for more than a decade. These changes would involve variations in the number of sorties within existing airspace, although no changes to the types of aircraft activities would occur. The ETI proposal does not include an increase in the number of supersonic flights or additions to the existing airspace configuration overlying Oregon, nor would there be any ground disturbance. The accompanying map indicates the extent of the existing airspace.

We have contacted Dr. Leland Gilsen, Oregon State Archaeologist, and conducted a records search for archaeological sites and National Register properties in the portion of Malheur County underlying the applicable airspace.

Global Power For America

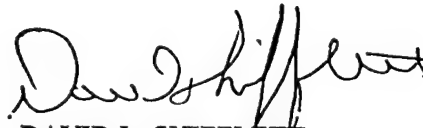
If you have any specific concerns about the ETI proposal, we would like to hear from you.
Please contact Brenda Cook at the following address:

HQ ACC/CEVA
Attention: Brenda Cook
129 Andrews Street, Suite 102
Langley AFB VA 23665-5542
(757) 764-6197

You may also contact Science Applications International Corporation (SAIC), the Air Force's contractor at the following address:

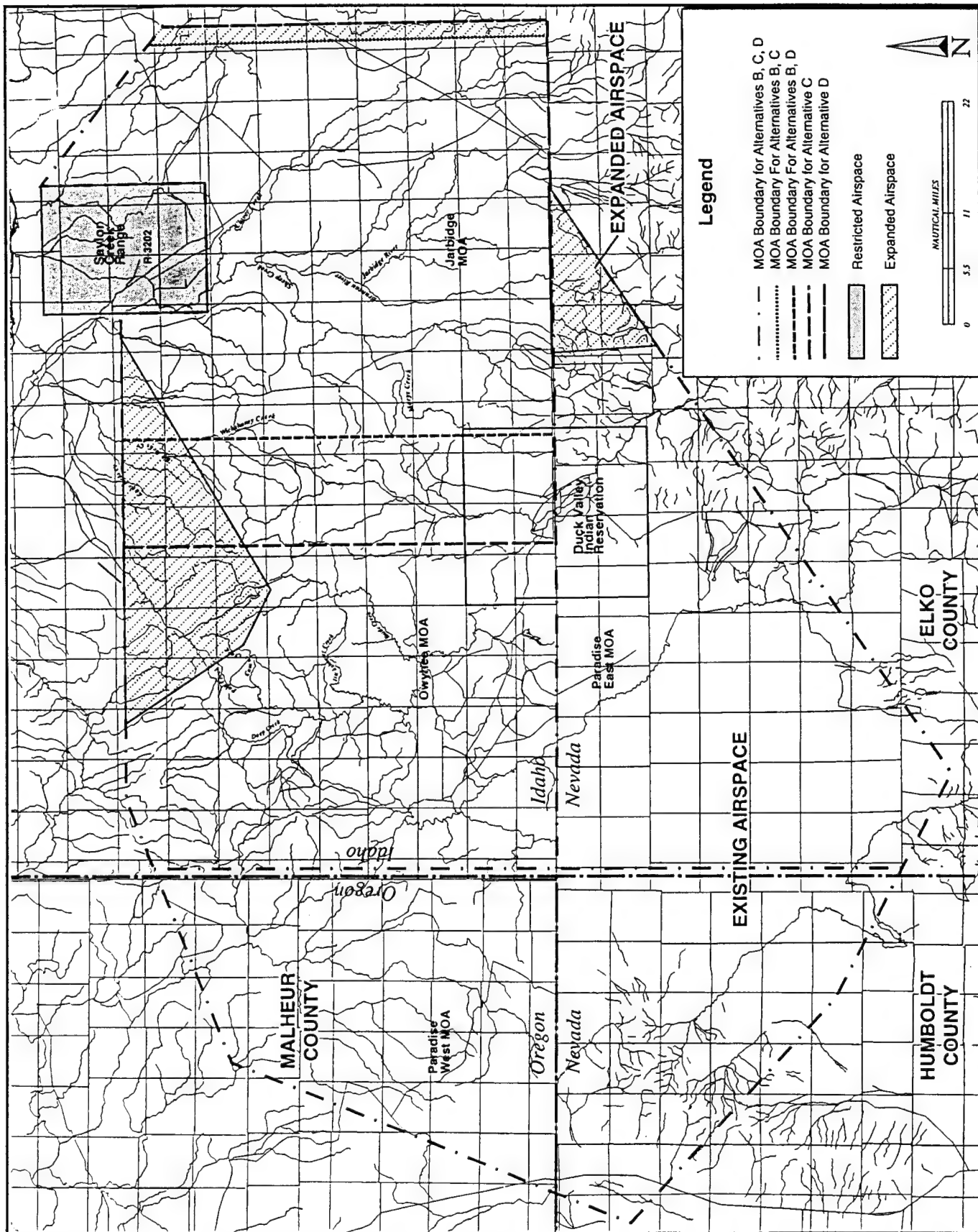
Science Applications International Corporation
Attention: Jim Rudolph
405 South 8th Street, Suite 301
Boise, Idaho 83702
(208) 344-5001

Sincerely

A handwritten signature in black ink, appearing to read "David L. Shifflett". The signature is fluid and cursive, with the first name "David" being more prominent.

DAVID L. SHIFFLETT
Acting Chief, Environmental Analysis Branch

Attachment:
Map



Project Components - Airspace



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

11 9 DEC 1996

HQ ACC/CEVA
129 Andrews St, Suite 102
Langley AFB VA 23665-2769

Mr. Wilson Crutcher, Chair
Fort McDermitt Tribal Council
Fort McDermitt Reservation
P.O. Box 457
McDermitt, Nevada 89421

Dear Mr. Crutcher

The purpose of this letter is to notify you that the United States Air Force's Air Combat Command (ACC) is in the process of preparing an Environmental Impact Statement (EIS) addressing the Enhanced Training in Idaho (ETI) proposal. The Air Force is producing this EIS in compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality regulations implementing NEPA, the Federal Land Policy and Management Act (FLPMA), Air Force Instruction 32-7061, and other applicable federal and state-delegated environmental legislation. With this letter we are also soliciting specific concerns the Shoshone and Paiute tribes on the Fort McDermitt Reservation may have about the proposal. This consultation is in accordance with the Executive Memorandum (29 April 1994) entitled, "Government-to-Government Relations with Native American Tribal Governments."

The Air Force proposes the ETI project to provide high-quality composite wing training for the 366th Wing near Mountain Home Air Force Base, Idaho. This proposal would construct a 12,000-acre tactical training range, 5 simulated target areas, and a series of 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County, Idaho. The current airspace structure would also be modified by this proposal, including airspace overlying the Fort McDermitt Reservation in Oregon and Nevada, parts of Malheur County, Oregon, and Elko and Humboldt Counties, Nevada.

The proposed action and alternatives would create changes in the existing Paradise West Military Operating Area (MOA) overlying Nevada and Oregon. This MOA has existed, and has been used for more than a decade. These changes would involve variations in the number of sorties within existing airspace, although no changes to the types of aircraft activities would occur. The ETI proposal does not include an increase in the number of supersonic flights within the existing airspace. There would be no ground disturbance under the affected airspace on the Fort McDermitt Reservation, nor in Malheur, Humboldt, and Elko Counties, nor would access to any lands in these counties be affected by the proposed action. The accompanying map indicates the extent of the existing airspace.

Global Power For America

If you have any specific concerns about the ETI proposal, we would like to hear from you. Please contact Brenda Cook at Headquarters, ACC:

HQ ACC/CEVA
Attention: Brenda Cook
129 Andrews Street, Suite 102
Langley AFB, VA 23665-5542
(757) 764-6197

You may also contact Science Applications International Corporation (SAIC), the Air Force's contractor, at the following address:

Science Applications International Corporation
Attention: Jim Rudolph
405 South 8th Street, Suite 301
Boise, Idaho 83702
(208) 344-5001

Sincerely

A handwritten signature in dark ink, appearing to read "David L. Shifflett", written in a cursive style.

DAVID L. SHIFFLETT
Acting Chief, Environmental Analysis Branch

Attachment:
Map

11.0 LIST OF REPOSITORIES

11.0 LIST OF REPOSITORIES

Idaho

American Falls District Library 308 Roosevelt Street American Falls, ID 83211	Lost Rivers Community Library 126 S. Front Street Arco, ID 83213	Ada Community Library 10664 West Victory Rd. Boise, ID 83709
Boise Public Library 715 South Capitol Blvd. Boise, ID 83702	Boise State University Library 1910 University Drive Boise, ID 83725	Bureau of Land Management Boise District Office 3948 Development Way Boise, ID 83705
Bureau of Land Management Idaho State Office 1387 Vinnell Way Boise, ID 83709	Idaho Governor's Office Statehouse Mail Boise, ID 83720	Idaho State Library 325 West State Street Boise, ID 83702
Legislative Reference Library State Capitol - Lower Level East Boise, ID 83720-0054	Bruneau Valley Library Box 278 Bruneau, ID 83604	Buhl Public Library 215 Broadway Avenue North Buhl, ID 83316
Burley Public Library 1300 Miller Avenue Burley, ID 83318	Albertson College Library 2122 Cleveland Blvd. Caldwell, ID 83605	Caldwell Public Library 1010 Dearborn Caldwell, ID 83605
Coeur d' Alene Public Library 201 Harrison Avenue Coeur d' Alene, ID 83814	Eagle Public Library 67 East State Street Eagle, ID 83616	Emmett Public Library 275 S. Hayes Avenue Emmett, ID 83617
Camas County Elementary School Library 313 Camas Street Fairfield, ID 83327	Filer Public Library 217 Main Filer, ID 83328	Shoshone-Bannock Library P.O. Box 306 Fort Hall, ID 83203
Glenns Ferry Public Library P.O. Box 910 Glenns Ferry, ID 83623	Gooding Public Library 306 5th Avenue West Gooding, ID 83330	East Owyhee County Library District P.O. Box 100 Grand View, ID 83624
Hailey Public Library 12 West Carbonate Hailey, ID 83333	Homedale Public Library 125 W. Owyhee Homedale, ID 83628	Idaho Falls Public Library 457 Broadway Idaho Falls, ID 83402-3637
Jerome Public Library 100 First Avenue East Jerome, ID 83338	Community Library Association 415 Spruce Avenue North Ketchum, ID 83340	Kimberly Public Library 120 Madison Street West Kimberly, ID 83341

Kuna School Community
Library
1360 Boise Street
Kuna, ID 83634

Lizard Butte District Library
P.O. Box 60
Marsing, ID 83639

McCall Public Library
218 Park Street
McCall, ID 83638

Meridian District Library
18 East Idaho Avenue
Meridian, ID 83642

Middleton Public Library
P.O. Box 519
Middleton, ID 83644

University of Idaho Library
U.S. Government Documents
Moscow, ID 83844-2353

Mountain Home AFB Library
520 Phantom Ave., Bldg. 2427
Mountain Home AFB, ID 83648

Mountain Home City Council
160 South 3rd East
Mountain Home, ID 83647

Mountain Home Public Library
790 North 10th East
Mountain Home, ID 83647

Owyhee County
Commissioners
Owyhee County Courthouse
Murphy, ID 83650

Nampa Public Library
101 11th Avenue South
Nampa, ID 83651

Payette Public Library
24 South 10th Street
Payette, ID 83661

Eli M. Oboler Library
Idaho State University
Pocatello, ID 83209-8089

Idaho Museum of Natural History
Idaho State University
Pocatello, ID 83209

Pocatello Public Library
812 S. Clark Street
Pocatello, ID 83201

Post Falls Public Library
821 N. Spokane Street
Post Falls, ID 83854

Demary Memorial Library
417 Seventh Street
Rupert, ID 83350

Bureau of Land Management
Shoshone District Library
400 West "F" Street
Shoshone, ID 83352

Shoshone Public Library
211 S. Rail Street
Shoshone, ID 83352

Bureau of Land Management
2620 Kimberly Road
Twin Falls, ID 83301

College of Southern Idaho
315 Falls Avenue
Twin Falls, ID 83303

Twin Falls Public Library
434 2nd Street East
Twin Falls, ID 83301

Weiser Public Library
628 East 1st Street
Weiser, ID 83672

Nevada

Nevada State Clearinghouse
Department of Administration
Capitol Complex
Carson City, NV 89170

Bureau of Land Management
Elko District Office
569 Court
Elko, NV 89801

Duck Valley Reservation
Tribal Chairman
P.O. Box 219
Owyhee, NV 89832

Bureau of Land Management
Winnemucca District Office
825 North 2nd
Winnemucca, NV 89445

Humbolt County Library
85 East 5th Street
Winnemucca, NV 89445

Oregon

Harney County Library
80 West "D" Street
Burns, OR 97720

Jordan Valley City Hall
Jordan Valley, OR 97910

Malheur County Library
388 SW 2nd Avenue
Ontario, OR 97914

Oregon State Library
250 Winter Street NE
Salem, OR 97310

Vale Public Library
115 East "A"
Vale, OR 97918

Utah

Salt Lake City Library
209 E. 500 S.
Salt Lake City, UT 84111

Washington, DC

Bureau of Land Management
18th and "C" Streets, N.W.
Washington, DC 20240

HQ U.S. Air Force
Pentagon
Washington, DC 20330

Virginia

HQ Air Combat Command
Langley AFB, VA 23665

APPENDIX A
TRAINING TERMINOLOGY

Appendix A: Training Terminology

Continuation Training. Continuation training (CT) ensures that aircrews maintain and hone their proficiency to conduct basic aircraft handling, weapons delivery and mission essential skills involved in fulfilling their unit's mission. Performed on a daily basis by mission qualified Air Force aircrews, continuation training is conducted throughout each aircrew member's assignment to a base. Four fundamental categories of continuation training are required: air-to-ground training, air-to-air training, low-altitude operations, and aerial refueling. These categories include many subcategories reflecting a variety of operational tasks, each of which is described below.

Air-to-Ground Training. Air-to-ground training employs all the techniques and maneuvers associated with weapons use and includes low- and high-altitude tactics, navigation, formation flying, target acquisition, and defensive reaction. Training activities under continuation training include surface attack tactics, different modes of weapons delivery, electronic combat training, and the use of defensive countermeasures such as chaff and flares.

Surface Attack Tactics. This training involves various aircraft approaches to targets and speeds and emphasize locating and destroying targets while avoiding or defeating defensive threats such as electronic emitters. Electronic emitters provide realism in training against tactical targets.

Weapons Delivery. For either conventional or tactical training, weapons delivery training missions can consist of passes on multiple targets, employing several different delivery events. To achieve readiness, five categories of weapons delivery events need to be performed: full-scale weapons delivery, strafe, level delivery, diving delivery, and climbing delivery.

Conventional Weapons Delivery Training. This training involves practice ordnance deliveries in a highly structured, repetitive learning environment. Aircrews fly predetermined flight tracks against highly visible targets and receive feedback from an on-site range control officer.

Tactical Weapons Delivery Training. This type of weapons delivery involves using various patterns and techniques to minimize flight path predictability while allowing sufficient time for accurate weapons delivery. Tactical ranges provide a greater array of targets, configured and spaced to simulate conditions like those expected in combat. Aircrews must acquire the target and accurately deliver ordnance while simultaneously avoiding detection and targeting by air defenses.

Air-to-Air Training. Air-to-air training prepares aircrews to achieve and maintain air superiority over the battlefield and defeat enemy aircraft. Air-to-air training often includes some aircraft playing the role of adversaries, or enemy forces. Air-to-air training activities include advanced handling characteristics, air combat training, low-altitude air-to-air training, and air-to-air intercept training. This training also requires the use of defensive countermeasures, such as chaff and flares.

Advanced Handling Characteristics. This training involves maneuvering aircraft at speeds and flight configurations that are close to the maximum capability of the operational system. Such maneuvering can include maximum rate/minimum time turns, maximum/optimum acceleration and deceleration techniques, and confidence maneuvers.

Air Combat Training. This activity integrates Advanced Handling Characteristics with engaging targets, adding altitude and maneuvering speed to the complexity of creating a weapons delivery solution.

Low-Altitude Air-to-Air Training. Combined with other air-to-air training elements, this training involves detecting, engaging, or evading an opposing aircraft at low altitudes.

Air Intercept Training. Air intercept training generally consists of four to eight aircraft initially positioned at extreme ends of a MOA. The "friendly" aircraft use visual and electronic techniques to locate and intercept the "adversary" aircraft as a prelude to air combat training maneuvers.

Electronic Combat. Electronic combat training requires aircrews to interpret radar warning receiver displays, activate electronic countermeasures equipment, and perform effective evasive maneuvering. This training also includes recognition of the effects of jamming in aircraft systems and operating and employing effective electronic counter-countermeasures, including chaff and flares. Electronic emitters provide the signals that aircrews require for electronic combat training. Electronic combat training is conducted on MTRs, MOAs, and restricted airspace, at a variety of altitudes ranging from 500 feet AGL to 50,000 feet MSL. Aircrews normally avoid the specific areas where electronic emitters are located.

Defensive Countermeasures. In the training environment, aircrews must train to recognize when they are engaged by adversaries, identify the adversaries, and select and perform the appropriate countermeasure effectively. Depending upon the threat and specific aircraft capabilities, one or a combination of these countermeasures are used. Evasive maneuvers, which include climbing, diving, and turning, require sufficient airspace to avoid being targeted by threat systems. Aircraft use radio frequency (RF) transmissions to jam air and ground radar tracking systems. Chaff and flares are used by aircraft as defenses against radar targeting and heat-seeking threats, respectively. Aircraft dispense chaff and/or flares in concert with evasive maneuvers to avoid targeting during both air-to-ground and air-to-air operations.

Low-Altitude Operations. Low-altitude operations (LOWOPS) ensures proficiency in low-altitude navigation, electronic combat training, and low-altitude maneuvering. LOWOPS include the fundamental aspects of navigation, formation flying, development of situational awareness of aircrews, and aircraft handling performance characteristics. LOWOPS are conducted on MTRs and in MOAs, generally between 500 and 1,500 feet AGL, depending upon the aircraft type and terrain.

Aerial Refueling. Aerial refueling serves two primary functions: it permits aircraft assigned to air-to-air and air-to-ground operations to remain "on-station" (i.e., assigned position in the operations arena) without returning to the airfield; and it provides aircraft the capability to conduct, when necessary, long-range flights to operations areas or targets. Aircrews flying fighters and bombers need to be capable of efficiently and safely receiving fuel, whereas the tanker aircrews must train to dispense fuel to a wide variety of aircraft. Refueling operations are performed in designated air refueling tracks.

Composite Wing Training (CWT). CWT provides realistic simulated battlefield conditions for training aircrews under circumstances that reflect actual combat. CWT integrates flights of multiple aircraft with various missions into a single simulated scenario employing many types of mission roles. CWT also often involves participation of aircraft that adopt the roles and tactics of the "adversary" in a training scenario.

Air Interdiction. Air interdiction training involves using the range of operations designed to disrupt the ability of enemy forces against friendly forces by destroying the ability to communicate and deploy forces to combat missions.

Suppression of Enemy Air Defenses (SEAD). SEAD training is designed to provide aircrews with the capability to disrupt ground-based enemy air defense (e.g., radar and surface-to-air missiles) through a combination of using air-to-ground missiles, ordnance delivery, and electronic combat.

Airborne Command and Control. An important facet of CWT, airborne command and control operations focus on providing aircrews with "real time" direction to conduct the air-to-air and air-to-ground battle, and to identify airborne and ground-based targets and threats.

APPENDIX B
STATEMENT OF PUBLIC PARTICIPATION

STATEMENT OF PUBLIC PARTICIPATION

1.0 INTRODUCTION

This document presents a summary of the public participation efforts associated with the Enhanced Training in Idaho (ETI) environmental impact analysis process (EIAP). It has been prepared in accordance with federal regulations (43 CFR 2310.3-2) pertaining to development and submittal of the land withdrawal case files. The regulations were developed pursuant to Section 204(10) of the Federal Land Policy and Management Act of October 1976 (FLPMA), which states that lands suggested for withdrawal must be reviewed.

Many opportunities were available for public participation in the ETI EIAP. These included:

- scoping sessions and comment period;
- receipt of and comment on newsletters;
- participation in community group meetings or agency consultation; and
- public hearings and comment period.

2.0 SCOPING PROCESS

The scoping period for the ETI EIAP began when the Notice of Intent was published in the Federal Register on January 29, 1996. The closing date for the scoping period was set for August 1, 1996. Although the receipt of public comments is most useful during the early stage of the EIAP, the Air Force stated during the scoping sessions that they would welcome comments throughout the EIS analysis and preparation process.

The Air Force's intent during the scoping process was to provide the greatest level of opportunity for government agencies, special interest groups, and the general public to learn about the Air Force's proposal and to offer several ways for those interested to express their thoughts regarding the proposal. Display ads and press releases (Attachment A) announcing the scoping sessions were placed in local newspapers on these dates:

- *Idaho Statesman*, June 2 and June 9
- *Times-News* in Twin Falls, June 9 and June 16
- *Elko Daily Free Press*, June 25 and June 28
- *Argus Observer* in Ontario, Oregon, June 30, 1996

Public service announcements were also aired on regional radio and television stations.

The scoping sessions were designed in an "open house" format to create a comfortable atmosphere for attendees — one in which participants could speak individually to Air Force

and Bureau of Land Management (BLM) personnel. During the sessions, attendees were encouraged to ask questions and provide input.

At the front door of every scoping session location, Air Force personnel were available to greet attendees and guide them in the right direction once inside the building.

Several Air Force personnel were stationed at the sign-in table to greet attendees and request they write in their name and address on the registration sheet. They were given two fact sheets (Attachment B), then directed to the first display. As a point of interest, people could look at an emitter that was parked in front of the building. Air Force personnel were stationed with the truck to answer any questions.

Four principal displays were developed with key messages and information to help people understand what ETI was all about. The displays were arranged so that attendees were presented information in a specific order as they progressed to each display. Given the volume at each of the booths, however, attendees may not have visited the booths in a specific order. Copies of the displays were provided as additional handouts and are included as Attachment C to this report.

Additional displays were also prepared to explain the current use of the airspace and the proposed airspace expansion. These displays consisted of mounted maps on easels. Another display discussed the alternative identification process.

The booths were staffed by Air Force and BLM personnel, as appropriate. The U.S. Army Corps of Engineers (Seattle) and Federal Aviation Administration (FAA) provided additional support at some meetings. In addition to personnel assigned to specific booths, senior Air Force officers and contractors assisted in maintaining the flow of people through the booths, relieved booth personnel for breaks, and more importantly, helped to address specific issues arising at the booths.

There were four methods of commenting available to the public during the scoping sessions. Attendees could:

1. give verbal testimony to a court reporter;
2. hand in written comments they brought with them to the scoping session or complete a written comment form provided by the Air Force;
3. personally type in comments at one of the available computers or have Air Force personnel type the comment (comments were printed out immediately upon completion and were signed by the commentor); or
4. write comments on a large flip chart/easel pad, to allow for other individuals to view the comments.

A refreshment table was provided at each of the scoping sessions.

Scoping sessions were held at eight locations throughout Idaho, Oregon, and Nevada in support of the ETI training range proposal. Additionally, representatives from the 366th

Wing offered to discuss the proposal with members of the Shoshone-Paiute tribal council in a government-to-government forum. Tribal chairman James Paiva invited the Wing to the Duck Valley Reservation. Chairman Paiva asked that the Wing present the same information to tribal members as had been presented at the scoping sessions. This consultation with the Shoshone-Paiute tribes is consistent with Executive Order 13007 and a June 1994 White House memorandum concerning "Government-to-Government Relations with Native American Tribal Governments." The schedule for the scoping sessions and attendance is presented in the table below.

Written and verbal comments received from the general public, special interest groups, and government agencies during the comment period were reviewed to summarize the scope of comments and attendance. This review was documented and included in a Scoping Summary Report which was distributed to participating individuals within the Air Force and the BLM to identify issues to be addressed in the draft environmental impact statement (EIS). The report was based on all verbal and written comments submitted through August 12, 1996. In total, 409 comments were received at the scoping sessions; 115 comments were received via the Internet; and 151 written comments were received via mail through August 1, 1996.

Schedule of Sessions and Attendance

<i>Date</i>	<i>Location</i>	<i>Attendance</i>
June 4, 1996	Elks Lodge, 327 S. 3rd West, Mountain Home, ID	71
June 6, 1996	Rim Rock High School, Bruneau, ID	23
June 10, 1996	Boise State University, Jordan Ballroom, Boise, ID	61
June 11, 1996	Boise State University, Jordan Ballroom, Boise, ID	83
June 13, 1996	Three Creek School, Three Creek, ID	22
June 17, 1996	College of Southern Idaho, Fine Arts Auditorium, 315 Falls Ave., Twin Falls, ID	47
June 20, 1996	Duck Valley Reservation	23
July 1, 1996	Elko County Library, 720 Court Street, Elko, NV	12
July 2, 1996	Lions' Den, Jordan Valley, OR	7

3.0 NEWSLETTERS

A mailing list was developed from the names and addresses collected during the scoping period. The sources included:

- scoping meeting attendance sheets;
- written and verbal comment forms;
- return postcards from the newsletters; and
- letters received requesting that the sender be placed on the mailing list.

The list was augmented with the names of interested agencies and groups and local and regional repositories. This effort was led by public affairs personnel at the 366th Wing at Mountain Home AFB.

The goal of maintaining communication with people on the mailing list was accomplished through a series of four newsletters. The newsletters were prepared at specific times during the environmental process and the text written to correspond with the EIS process occurring during that particular timeframe.

- Newsletter 1: Introduced the proposal, discussed the National Environmental Policy Act (NEPA), and summarized the results of scoping. Published November 1996.
- Newsletter 2: Focused on the EIAP and the land withdrawal process. Published January 1997.
- Newsletter 3 (Spring 1997): Focused on the public hearings and the comment period for the Draft ETI EIS.
- Newsletter 4 (Winter 1998): Will review issues from the public comment period for the Draft EIS and announce the preferred alternative.

Each newsletter includes a timeline for the EIAP, with the appropriate segment highlighted. A contact name is always provided, along with an address and phone number for any questions or comments. A self-addressed, postage-paid response card is also a regular feature of the newsletters. Specific questions are asked on each response card providing an additional opportunity for these and other comments to be sent directly to the Air Force. Approximately 1,000 copies of each newsletter were distributed to those people on the mailing list and also through Mountain Home AFB and the BLM State Office.

4.0 PARTICIPATION IN COMMUNITY GROUP MEETINGS OR AGENCY CONSULTATION

Prior to publication of the Notice of Intent, the Air Force sought input on the proposal and the EIAP from numerous groups and agencies. As a cooperating agency, the BLM has contributed insight, as well as resource information, related to the project proposal. The 366th Wing also met with interest groups, service clubs, and state and federal agencies throughout southern Idaho. These presentations and discussions have continued since the January 29, 1996 publication of the Notice of Intent, throughout the scoping process, and through publication of the Draft and Final EIS. Some of the presentations made by the 366th Wing and other Air Force representatives have included:

- Duck Valley Reservation
- Federal Aviation Administration
- Idaho State Historic Preservation Office
- Idaho Department of Fish and Game (Natural Resources Council)
- Idaho Department of Lands
- Idaho Air National Guard (124 FG)
- Idaho Army National Guard
- Wilderness Society - Idaho Chapter
- Foundation for North American Sheep
- Twin Falls Rotary Club
- U.S. Fish and Wildlife Service
- Owyhee Co. Cattlemen's Association
- French Military Delegation
- Mountain Home Chamber of Commerce
- Governor of Idaho
- Idaho Congressional Delegation
- 71 Livestock Assoc., Twin Falls
- Boise Military Affairs Committee
- Owyhee Co. Commissioners
- BLM Resource Advisory Committee
- Owyhee Co. Planning Committee
- Blue Lakes Rotary Club, Twin Falls
- Mountain Home Ministerial Society
- Salt Lake City Air Route Traffic Control Center
- FAA Northwest Mountain Region, Seattle
- Community Appreciation Day, Mountain Home AFB
- Bureau of Aeronautics, Boise, ID
- Buhl Kiwanis
- Castleford City Council Meeting
- Northwest Mountain and Western Pacific Region Airspace and Range Conference, Seattle

In addition to these informal meetings and presentations on the proposal, there was also formal consultation. Chapter 10 of the ETI EIS provides documentation of this consultation.

5.0 PUBLIC HEARINGS AND COMMENTS

This section presents the results of the public hearings conducted for the ETI Draft EIS. The Draft EIS was prepared pursuant to NEPA and in accordance with the Council on Environmental Quality (CEQ) regulations, Air Force regulations, and FLPMA.

The purpose of the public hearings was to solicit comments relevant to the adequacy of the Draft EIS from government agencies, private organizations, and the public. The objective was to receive the comments and address them in the Final EIS. The public hearings were part of a 123-day public review process that began with the publication of the Notice of Availability in the Federal Register and public distribution on May 9, 1997. However, filing of the Draft EIS with the Environmental Protection Agency and Congressional distribution occurred on April 28, 1997. The 90-day comment period was originally scheduled to close August 6, 1997, but was extended for 33 days to end the comment period on September 8, 1997.

Seven public hearings were held at the six locations shown in the table below. The public hearing facility locations were arranged in the respective cities by the 366th Wing Public Affairs (WG/PA).

Public Hearing Schedule and Locations

City	Date	Facility
Mountain Home	Tuesday, June 3	Mountain Home Auxiliary Gym and Foyer
Grand View	Wednesday, June 4	Grand View Elementary School Gym and Foyer
Twin Falls	Thursday, June 5	College of Southern Idaho, Shields Bldg, Rooms 117/118 and Room 106 for displays
Three Creek	Friday, June 6	Three Creek School House
Duck Valley Reservation	Monday, June 9	Human Development Center
Boise	Thursday, June 12	Boise State University, Jordan Ballrooms B and C
Boise	Friday, June 13	Same as June 12

5.1 Public Hearing Format

The public hearing format combined the traditional hearing format with Military Judge presiding, with an "open house" format to create a comfortable atmosphere for attendees. Within the space permitted at each facility, four separate areas were arranged.

1. **Information/Greeting Area:** general information, sign-up sheets, speaker cards, facts sheets, newsletters, repository list
 - A registration table was set up near the entrance to the hearing facility. Attendees were requested to register and complete a speaker card if they wanted to provide verbal testimony. Attendees were told they could fill out a speaker's card anytime during the hearing. The speaker cards were given to the Hearing Officer once the

testimony time commenced. If people arrived after the testimony period began, any newly completed speaker cards were brought to the Hearing Officer.

2. Display Area: Four displays (balance, realistic training, the proposal, and public involvement), plus additional easel display map of the three proposal alternative sites
 - Between 6:00 and 6:30 pm, public hearing attendees had time to view displays and speak to Air Force and BLM representatives, ask questions, and pick up informational materials such as the Airspace Fact Sheet, 8 ½ x 11" copies of the displays, and the first three volumes of the ETI newsletters (see Attachment E).
 - Copies of the ETI Draft EIS and ETI Community Report were available at the hearings for distribution to interested parties who had not previously requested a copy or reviewed a copy at a local repository. Forty-one Draft EISs and 50 Community Reports were handed out during the hearings.
 - The displays, developed with key messages for the scoping meetings and updated for the public hearings, provided information to enhance public understanding of the intent of, the need for, and the environmental process addressing the proposal to enhance Air Force training in Idaho. The displays were arranged in the foyer of each facility so hearing attendees were presented information in a specific order as they progressed to each display. Hearing attendees could view the displays throughout the course of the meeting.
3. Informal Comment Area: Written comment forms, computers for individual or assisted comments, individual stenographer in larger forums (Boise and Twin Falls)
 - Computers were available for attendees to input and print comments. Written comment sheets were also available. In addition to the court reporter for the public speaking periods, a personal court reporter was available at Boise and Twin Falls throughout the hearings for those wishing a private setting to provide verbal comments and to accommodate potentially large volumes of speakers. Copies of the Draft EIS and Community Report were available in this area for viewing.
4. Public Hearing Area: Auditorium setting with Hearing Officer (Military Judge) presiding for presentation of verbal comments
 - The Hearing Officer made a brief statement describing the purpose of the hearing, and defined the rules of conduct for the hearing. The Hearing Officer explained he was an impartial participant in the hearing and was appointed by the Air Force Judge Advocate, with no connections to the proposed action, area, or command sponsoring the proposed action, and that he had no input into any decision made in association with the proposed action.
 - The briefer presented a description of the proposed action and alternatives and an overview of NEPA, the Air Force's environmental impact analysis process, and FLPMA, explaining the processes and the importance of public involvement. He also

described how the environmental analysis was conducted and summarized the resulting environmental impacts of the proposed action and alternatives.

5.2 Public Hearing Comment Process

- 366th WG/PA provided the Hearing Officer with the speaker cards and identified VIPs (cards were separated into two categories and addressed in the following priority: (1) elected officials and (2) general audience). The Hearing Officer called elected public officials or their designated representatives to comment first. All others who indicated a desire to speak were called in order of sign-up.
- After the Hearing Officer called on all those who turned in a speaker card, he asked the general audience if anyone else desired to make a verbal comment or submit a written comment.
- Each speaker was given a 3-minute time limit. When the 3-minute time was up, the Hearing Officer let the speaker finish his/her thought. Speakers who had additional comments beyond the 3 minutes were invited to add to their comments after everyone had a chance to speak, if time permitted. All persons attending the hearing were given a reasonable opportunity to present verbal or written statements.
- The attendees were encouraged to submit written comments at or following the hearing and before the comment period ends on August 6, 1997. (As noted earlier, the close of the comment period was later extended to September 8, 1997.)
- Because all desiring to comment did not have access to E-mail, and to ensure an accurate record, commentators desiring to use E-mail were instructed to provide direct written comments. E-mail notes would not be included as part of the official record.

5.3 Public Hearing Notification

Extensive notification activities were undertaken to promote local and regional awareness of the public hearings.

- Congressional notification was implemented by HQ USAF/XOOR, SAF/LLP, and ACC/CEVA. On April 28, 1997, a briefing was held in Senator Kempthorne's office in Washington, DC to staff members of the Idaho delegation. Present were representatives of Dirk Kempthorne, Larry Craig, Mike Crapo, and Helen Chenoweth. During this briefing, each representative of the Idaho delegation was given a Draft EIS.
- After Congressional notification, the 336th WG/PA and ACC/CEVA initiated notification to government agencies, the affected communities, public interest groups, and individuals. Notification was through display ads and news releases that were submitted to local and regional newspapers, radio stations, and TV stations. A News Release for the public hearings appeared in the Federal Register on

May 2, 1997, and the Draft EIS Notice of Availability appeared in the Federal Register on May 9, 1997 (see Attachment F for copies of notification documents).

- As a reminder of the earlier notifications, the 3rd ETI Newsletter, mailed 1-1/2 weeks in advance of the hearings, contained information regarding the dates, time, and locations of the public hearings. The newsletters were sent to everyone on the ETI mailing list which includes addresses for the local offices of the appropriate U.S. Senators and Congressmen, state and local elected officials, state and local agencies, state and local public interest groups, and interested individuals. The mailing list is continually updated with new names, address corrections, or deletions. If a publication was returned because of incorrect address, it was re-mailed if an address correction was made since the mailing.

5.4 Public Hearing Statistics

The table below summarizes public hearing attendance, the number of speakers providing verbal comments, and the number of written and computer comments received at the meetings. The totals for personal verbal commentators are also included in the "Speakers" column. All comments received during the public hearings and comment period are included in Volume 2 of this Final EIS.

Attendance and Participation

Date	Location	Attendees	Speakers	Written Comments	Wordprocessed Comments
June 3, 1997	Mountain Home	68	11	8	15
June 4, 1997	Grand View	22	2	0	0
June 5, 1997	Twin Falls	53	20	11	4
June 6, 1997	Three Creek	20	2	0	0
June 9, 1997	Duck Valley	68	25	3	11
June 12, 1997	Boise	155	46	15	33
June 13, 1997	Boise	76	36	22	20
	TOTALS	462	142	59	83

6.0 CONCLUSION

The public participation opportunities for ETI EIAP were designed to fulfill the requirements of NEPA and FLPMA. The Air Force's intent was to go beyond the basic requirements of these two laws and provide the highest level-of-effort to make sure everyone interested in the ETI proposal was given a chance to review the information, ask questions and discuss concerns, and provide comments.

Attachment A

Display Ads and Press Releases Announcing the Scoping Sessions



DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO

The United States Air Force, in cooperation with the Bureau of Land Management, wants your help in shaping the Enhanced Training in Idaho proposal.

We welcome your attendance at our open house scoping meetings on the following dates:

<i>Date</i>	<i>Location</i>	<i>Time</i>
June 4, 1996	Elks Lodge, 327 S. 3rd West Mountain Home, Idaho	6:00 PM - 9:00 PM
June 6, 1996	Rimrock High School Bruneau, Idaho	6:00 PM - 9:00 PM
June 10 and 11, 1996	Boise State University Jordan Ballroom, Boise, Idaho	6:00 PM - 9:00 PM
June 13, 1996	Three Creek School, Three Creek, Idaho	6:00 PM - 9:00 PM
June 17, 1996	College of Southern Idaho Fine Arts Auditorium 315 Falls Ave., Twin Falls, Idaho	6:00 PM - 9:00 PM
July 1, 1996	Elko County Library 720 Court Street, Elko, Nevada	5:00 PM - 8:00 PM
July 2, 1996	Lions' Den, Jordan Valley, Oregon	5:00 PM - 8:00 PM

Comments will be accepted through July 31, 1996.

Please send your comments to:

U.S. Air Force / Bureau of Land Management
P.O. Box 329, Boise, ID 83701-0329

For more information, call the 366th Wing public affairs office, 208-828-6800

Display Ad



News Release

United States Air Force

366th Wing Public Affairs, 366 Gunfighter Ave, Ste. #152, Mountain Home AFB, ID 83648-5291
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205
e-mail: 366wgpa@cs366.mountainhome.af.mil

Release 96-04-06

April 29, 1996

SCOPING MEETINGS SCHEDULED

MOUNTAIN HOME AIR FORCE BASE, Idaho -- Scoping meetings concerning the Enhanced Training in Idaho (ETI) proposal will be held throughout Southern Idaho beginning in June, Air Force and Bureau of Land Management (BLM) officials announced today. At the meetings, representatives of the Air Force and the BLM will be on hand to explain the current proposal, plans to prepare an environmental impact statement (EIS), and the proposed withdrawal of federal lands. Members of the public are encouraged to comment on the proposal in writing or through verbal comments at the meetings.

"Scoping meetings are designed to help us focus our environmental impact statement in the right direction," said Col. Billy Richey, the 366th Wing director of staff. "We believe interested citizens can help us develop alternatives for an ETI proposal that meets the Air Force's needs, as well as the needs of others, during the scoping process."

— MORE —

SCOPING 2-2-2

"We hope the scoping meetings will generate information and ideas that will help to produce an array of alternatives that will be considered in the process," said Howard Hedrick, a natural resource specialist with BLM. "It's a time for us to listen to the public and then begin shaping the EIS."

The ETI proposal is designed to enhance the local training opportunities available to the wing, adding much needed flexibility and realism for aircrews. The Air Force developed the proposal after consulting with Idaho Governor Phil Batt, the Idaho Congressional delegation, representatives of the Interior Department, the Shoshone-Paiute tribes and other interested parties.

"We've done a lot of homework in preparing this proposal," Richey said. "We're looking forward to taking Enhanced Training in Idaho to the public and hearing their comments, concerns and suggestions."

The meeting dates and locations are as follows:

June 4 - Mtn. Home Elks Lodge, Mtn. Home

June 6 - Rimrock High School, Bruneau

June 10 & 11 - Boise State University, Jordan Ballroom, Boise

June 13 - Three Creek School, Three Creek

June 17 - College of Southern Idaho Fine Arts Auditorium, Twin Falls

All meetings will be held from 6 - 9 p.m.

For more information, call 366th Wing Public Affairs at 828-6800.

News Release

United States Air Force
ENHANCED TRAINING IN IDAHO

366th Wing Public Affairs, 366 Gunfighter Ave. Ste. #152, Mountain Home AFB, ID 83648-5291
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205
e-mail: 366wgpa@cs366.mountainhome.af.mil

Release 96-05-06
May 30, 1996

The Enhanced Training in Idaho proposal is designed to provide realistic training opportunities for the aircrews stationed at Mountain Home Air Force Base.

"Frequent realistic training enhances the skills aircrews will need in the future," said Col. Bill Richey, the ETI project officer for the base.

"The Air Force has attempted to develop a training range proposal that will have minimum impact upon the Owyhee canyonlands and the residents of Idaho and the Shoshone-Paiute tribes of Duck Valley."

The proposal provides environmental balance and realistic training with a minimum use of land," Richey said. The proposal and alternative would require the withdrawal of about 12,000 acres of land in Eastern Owyhee County.

Air Force Invites Public to Help With Proposal

MOUNTAIN HOME AIR FORCE BASE, Idaho -- The Air Force wants the public to help shape the Enhanced Training in Idaho (ETI) proposal. Scoping meetings, planned for eight locations throughout the region, will provide an opportunity for citizens to take part in the process. Air Force and Bureau of Land Management personnel will be present at the meetings.

These meetings will solicit public comments on the proposed training range and associated land withdrawal. Information gathered in these meetings will be used in the development of an Environmental Impact Statement.

Responding to Community Issues

"We have worked very hard to take into account the comments and concerns from past proposals as we developed the ETI proposal," stated ETI project officer Col. Bill Richey. "And, we have talked to many groups about the current alternatives.

"Scoping is the time when everyone has a chance to review the proposal and let us know if we have overlooked any resources, land uses or possible alternatives that will need to be studied. Ideally, the public will focus on the merits of the proposal, help shape our alternative or even recommend yet another workable alternative," Richey said.

-- MORE --

SCOPING 2-2-2

"Scoping is the time when everyone has a chance to review the proposal and let us know if we have overlooked any resources, land uses or possible alternatives that will need to be studied."

— Col. Bill Richey

□ For more information about Enhanced Training in Idaho scoping meetings, call the 366th Wing public affairs office, (208) 828-6800.

Open House Forum

Each scoping meeting will be a three-hour open house, designed to provide information about the proposal and seek information from the public that helps determine the areas, or scope of areas to be addressed in the Draft Environmental Impact Statement.

Air Force and Bureau of Land Management officials believe an open house format will encourage the greatest amount of people to make meaningful, constructive comments. While public testimony will not be part of the scoping meetings, testimony will be included for public hearings to be held after the Draft Environmental Impact Statement is released (scheduled for next spring).

Meeting participants can provide written comments, input comments into one of many computer stations or provide comments to a court reporter. Comments will be accepted throughout the process, but to ensure your issues and concerns are addressed as we develop the Draft Environmental Impact Statement, please mail your comments by July 31, 1996 to:

U.S. Air Force/Bureau of Land Management
P.O. Box 329
Boise, Idaho 83701-0329

The scoping meeting schedule is as follows:

June 4 - Mountain Home, Elks' Lodge, 6-9 p.m.
June 6 - Bruneau, Rimrock High School, 6-9 p.m.
June 10 - Boise, Boise State University Jordan Ballroom, 6-9 p.m.
June 11 - Boise, Boise State University Jordan Ballroom, 6-9 p.m.
June 13 - Three Creek, Three Creek School, 6 -9 p.m.
June 17 - Twin Falls, CSI Fine Arts Auditorium, 6-9 p.m.
July 1 - Elko, NV, Elko County Library, 5-8 p.m.
July 2 - Jordan Valley, OR, Lions' Den, 5-8 p.m.

News Release

United States Air Force

ENHANCED TRAINING IN IDAHO

366th Wing Public Affairs, 366 Gunfighter Ave, Ste. #152, Mountain Home AFB, ID 83648-5291
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205
e-mail: 366wgpa@cs366.mountainhome.af.mil

Release 96-07-06
July 23, 1996

Scoping Comment Period Open Through August 1

- ☐ Number of scoping meetings held between June 3 - July 2: 8
- ☐ Number of people in attendance at ETI scoping meetings: 349
- ☐ Number of scoping comments received so far: 300

☐ For more information about the Enhanced Training in Idaho proposal, call the 366th Wing public affairs office, (208) 828-6800.

MOUNTAIN HOME AIR FORCE BASE, Idaho -- The Air Force has completed public scoping meetings on the Enhanced Training in Idaho proposal. Comments may be provided through August 1, 1996.

The meetings were held in Mountain Home, Bruneau, Boise, Three Creek, Twin Falls, as well as Elko, Nevada, and Jordan Valley, Oregon. Air Force representatives also traveled to Owyhee, Nevada, to discuss the proposal with members of the Shoshone-Paiute tribes. In all, approximately 350 people attended the ETI scoping meetings.

"People attending these meetings increased the Air Force's understanding of what issues are important to the citizens of Idaho, Oregon and Nevada," said Col. Bill Richey, the 366th Wing director of staff. "The time and consideration taken by the people who have commented already will undoubtedly result in a more complete, responsive Environmental Impact Statement."

According to Richey, citizens have asked the Air Force to consider the following issues as they study the Clover Butte, Grasmere and No-Action Alternatives:

-- MORE --

SCOPING 2-2-2

"The time and consideration taken by the people who have commented already will undoubtedly result in a more complete, responsive Environmental Impact Statement."

— Col. Bill Richey

Wildlife. Groups and individuals have asked that we consider the welfare of wildlife such as California bighorn sheep, pronghorn antelope, and sage grouse.

Native Americans. Native Americans and non-Native Americans alike wish to see the Shoshone-Paiute way of life continue.

Recreation. People are interested in whether recreational opportunities or access will be limited as a result of the proposal.

Fire. Fire threatens the deserts of southern Idaho every summer and residents want to know if ETI will increase the frequency of fire.

Grazing. Groups and individuals have requested that the historical grazing right be preserved and that the local cattlemen be involved in the development of grazing options and operational procedures.

Roads. Residents and representatives of Owyhee County would like to ensure the project includes evaluation of the impact to the county roads and considers assistance with road maintenance.

Assessment teams have started collecting data at the Clover Butte and Grasmere locations. Data collection and analysis of the information will continue through the spring of 1997. A Draft Environmental Impact Statement will then be prepared and available for review. A series of public meetings will follow in the spring.

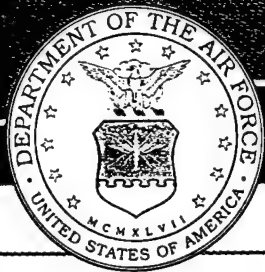
Richey encouraged people to send comments which focus on the merits of the proposal, help shape the proposed alternatives or recommend yet another workable alternative. Comments may be sent through August 1 to:

U.S. Air Force/Bureau of Land Management

P.O. Box 329

Boise, ID 83701-0329

Attachment B
Scoping Session Fact Sheets



FACT SHEET

ENHANCED TRAINING IN IDAHO

Training Range Need



Three of the most commonly asked questions about the need for Enhanced Training in Idaho are listed below.

Why does the composite wing at Mountain Home need Enhanced Training in Idaho?

The proposed range would permit us to conduct our tactical training in a more efficient, flexible manner.

1. The composite wing, made up of five different kinds of aircraft, began training together in 1992. Since that time, they have always satisfactorily accomplished tactical training, mainly at remote ranges in Utah and Nevada or through participating in world-wide exercises. The need is to continue that training, but to do so in a more frequent and efficient manner.
2. The proposal for Enhanced Training in Idaho would give the composite wing enhanced local opportunities to train using realistic strategies and tactics. With this training range and airspace proposal, we would be able to plan and practice

complex missions more efficiently, conduct local composite wing training, and simulate real world scenarios more frequently. This proposal would allow aircrews to realistically face a variety of targets and threats in preparation for future conflicts.

If you need this enhanced training, why don't you fly to Utah or Nevada?

The aircrews do fly to Utah, Nevada and elsewhere to get their training. However, local training allows the Air Force to use limited training hours wisely. The benefit of local training is described below.

1. By training closer to Mountain Home Air Force Base, aircrews use their fixed number of flying hours for realistic training, rather than traveling to distant locations. Funding limits the number of hours aircrews can fly. These hours are set and may be used for travel or training. By training locally, travel time is converted to training time.
2. The Enhanced Training in Idaho proposal provides for local realistic training. Frequent realistic training would enhance the skills our aircrews will need in the future.

How much acreage is really needed?

The Enhanced Training in Idaho proposal was designed to use a minimum amount of land while securing public safety and realistic training. The proposal was developed after consideration of different proposals, obtaining feedback from the public, Native Americans, and governmental agencies, and operating a composite wing for three

years. We listened and learned from public input and our training experience. The number of acres and the use of the land for the proposed range is described below.

1. Enhanced Training in Idaho proposes a 12,000-acre drop area. This drop area would include fenced targets under restricted airspace that would be used for realistic training. With the proposed restricted airspace, aircrews would be able to use the targets in the area and respond to threats. Only small (25-pound) non-explosive training ordnance would be used in this area. All training ordnance would be cleared from the area on a regular basis, and the metal would be recycled.
2. Enhanced Training in Idaho also proposes one 640-acre no-drop target and four 5-acre no-drop targets. These fenced, no-drop targets would include life-size plastic replicas of battle tanks and trucks, a simulated surface to air missile complex, early warning radar sites, and buildings

that represent two small industrial complexes. Aircrews would use these targets to practice tactics, but would not actually drop in these areas.

3. Enhanced Training in Idaho proposes ten 1-acre electronic emitter sites and twenty 0.25-acre electronic emitter sites. These emitter sites would be the parking locations near the target areas for aircrews to practice defensive maneuvers. Although only a few sites would be used at one time, the number of sites would allow for the emitters to be moved frequently for a constantly changing electronic range.

How can the public comment?

If you would like to comment on these issues, please send your comments to:

U.S. Air Force/Bureau of Land Management
Post Office Box 329
Boise, Idaho 83701-0329



FACT SHEET

ENHANCED TRAINING IN IDAHO

Airspace Proposal

Three of the most commonly asked questions about the Enhanced Training in Idaho airspace proposal are listed below.

Why do you need this extra airspace?

Increased airspace allows us to balance realistic training with the environment and traditional land uses. Some examples of the balance include the following.

1. The current vertical and horizontal airspace restricts air-to-air training, and the number of aircraft that can use the airspace at any one time. In the existing airspace, a bottleneck (a narrowing in the middle) exists along the eastern one-third of the Owyhee Military Operations Area and ends east of Highway 51 near Grasmere. This bottleneck is caused by the limited airspace between the current northern border and the Duck Valley Reservation. Because of this narrowing, the air traffic is concentrated in a small area over the Owyhee Canyons and between Riddle and Grasmere. The additions on the northern and southern boundaries of the existing airspace give the aircrews additional room to maneuver toward the targets from many directions and angles. Aircraft would disperse because they have more room to maneuver.
2. Increasing the airspace on the northern and southern boundaries would allow the Air Force

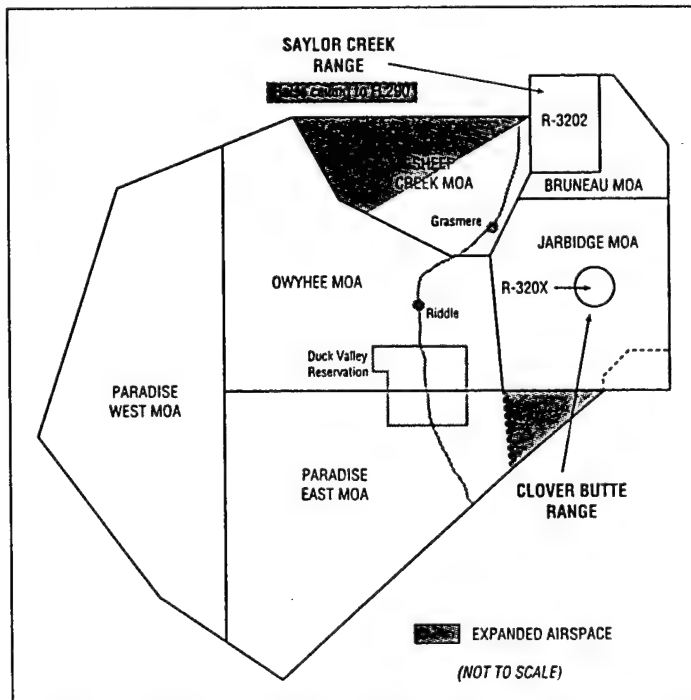


Figure 1. Alternative B Proposed Airspace Structure, Clover Butte Range

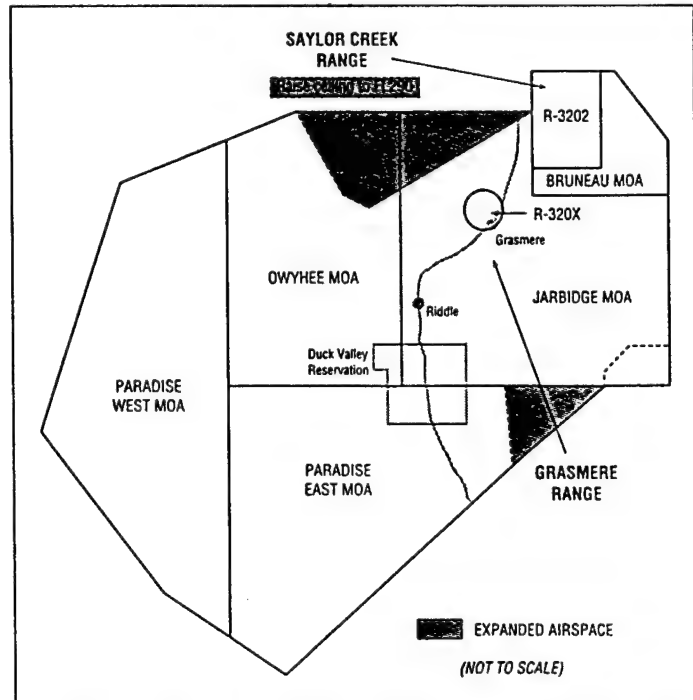


Figure 2. Alternative C Proposed Airspace Structure, Grasmere Range

to address seasonal concerns. An example of a seasonal concern would be moving air activity away from wildlife habitat during sensitive periods. With this increased airspace, air activity would be dispersed over the entire area, rather than the current concentration of flights over the Owyhee and Sheep Creek Military Operations Areas. This increased airspace would also provide the flexibility to temporarily move air activity from one area to another.

Where will you be flying?

Enhanced Training in Idaho proposes aircrews fly throughout the entire Military Operations Areas. A description of where we fly is provided below.

1. Most of the training flights are at high altitudes. It is forecast that more than 68% of the training flights would take place higher than 10,000 feet above the ground. It is also forecast that fewer than 21% of the training flights would take place below 1,000 feet. The remainder of training flights would take place between 1,000 and 10,000 feet.
2. Flight operations would continue to take place throughout the Mountain Home training airspace, just as they have since World War II. The flights would be dispersed throughout the entire training area and not restricted to following specific routes. Current flying activities normally begin at midmorning and end in the early evening on Monday through Thursday. Friday flying is normally completed by early afternoon. The 366th Wing rarely trains on weekends. These hours of operation would remain the same under the Enhanced Training in Idaho proposal.

3. In order to balance training needs with the needs of other users, the 366th Wing has designated areas that aircrews now avoid. Examples of this cooperation include the following.

- Aircrews of the 366th Wing do not fly in canyons.
- All training flights take place above 500 feet.
- Active airstrips within the airspace are avoided.

The Air Force's goal is to balance realistic training with the environment and traditional land uses.

Will the noise from air activity increase?

The draft Environmental Impact Statement analysis will study the effects of noise throughout the entire Military Operations Areas.

1. Noise analysis during preparation of the draft Environmental Impact Statement will focus on the number of flights over the training range and the sound levels of these overflights. The impact of this noise on the environment will be studied.
2. Because of the proposed increased airspace and the distribution of flights throughout the Military Operations Areas, it is predicted that noise levels would be reduced.

How can the public comment?

If you would like to comment on these issues, please send your comments to:

U.S. Air Force/Bureau of Land Management
Post Office Box 329
Boise, Idaho 83701-0329

Attachment C

Copies of the Scoping Session Displays

We Want Your Help In Shaping This Training Proposal.

Our responsibility is to keep the community informed and involved.

Your comments help us respond to community interests.

Representatives of the Department of Air Force, the Department of Interior, the Bureau of Land Management, the State of Idaho, and the Shoshone-Paiute Tribes discussed a new possible use.

The Air Force met with groups throughout southern Idaho to discuss the training range concept. Some of these groups included:

- Civic organizations
- Foundation for North American Wildlife
- Owyhee County Game and Fish Association
- Shoshone-Paiute Tribes
- State and local governments
- The Wildlife Society

Our ongoing efforts to keep you informed and involved include:

- Comment periods
- Informational workshops
- Media articles
- News letters
- Public hearings



DEPARTMENT OF THE AIR FORCE
ENHANCED TRAINING IN IDAHO

You can comment on the proposal in a variety of ways:

Mail:

U.S. Air Force/Bureau of Land Management
P.O. Box 329
Boise, Idaho 83701-0329

Scoping Meetings:

JUNE 1990

30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Our Goal Is To Balance Realistic Training With The Environment And Traditional Land Uses.

Characteristics of both the Clover Butte and Grasmere proposed alternatives provide realistic training areas.

Locations of both alternatives are designed to minimize impacts to the environment and land use.

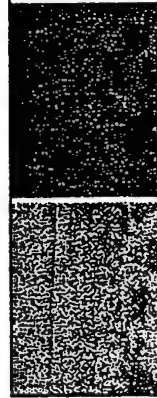


The LARF Core Training, Boulder Lake, Nevada
Alamo Right-of-Way, Nevada

As a first step to minimize impact, we considered:

- Areas of Critical Environmental Concern
- Cattle
- Grazing
- Known cultural resources
- Major roads and recreational areas
- Private property
- Wilderness study areas

We will continue to work with the people of Idaho, Native Americans, and government agencies to study and analyze these and other resources for the draft Environmental Impact Statement.



Alamo LARF Core Training, Boulder Lake, Nevada
Alamo Right-of-Way, Nevada

We identified the proposed locations by considering the following land and air space characteristics:

Land

- Suitable terrain (relatively flat) to accommodate range operations
- Close to existing roads

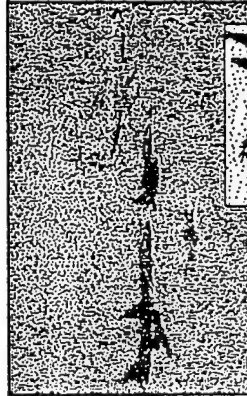
Airspace

- Sufficient lateral maneuvering room
- Drop and no drop target separation to provide flexible air operations

Using these and other characteristics, we can assess the realistic training range to train our soldiers.



DEPARTMENT OF THE AIR FORCE
ENHANCED TRAINING IN IDAHO



Along with the Eagle, the F-16 is a key element of the F-16 program.



Funding limits the number of hours aircraft can fly. These hours apply to time on the training range and time spent traveling to the training range.

We must use those hours wisely by:

- conducting travel time to training time
- training locally
- training near its base
- training as a composite wing

Enhanced Training in Idaho uses the wide use of our valuable training hours.



ENHANCED TRAINING IN IDAHO

Frequent Realistic Training Enhances The Skills Aircrews Will Need In The Future.

Local training maximizes the value of
a fixed number of training hours.

Realistic training means aircrews
train the way they intend to fight —
facing a variety of targets and threats.



Building skills for the future.

Enhanced Training in Idaho gives us the capability to:

- conduct local composite wing training
- eliminate real world's constraints (flexibility)
- plan and practice complex missions to include:
 - using several targets at the same time
 - approaching a target with several aircraft from many directions
 - using precision timing to a fixed in-flight success
 - responding to a simulated enemy threat (electronic emissions at different locations)

To accomplish this, the proposal includes:

- a drop area
- no drop targets
- electronic emitters

Drop area — an area where a fixed drop area, non-explosive, training ordinance on target.

No-drop target — a screen provides a target at target, but do not release training ordinance.

Electronic emitter site — a target spot for an emitter.

Attachment D

ETI Newsletters



What is ETI?

ETI stands for Enhanced Training in Idaho. Enhanced Training in Idaho is a proposal that is designed to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base in Idaho. This newsletter is one of four scheduled to keep you informed about the Enhanced Training in Idaho proposal and the environmental impact analysis process. ■

Want To Know More?

If you have questions or need more information on Enhanced Training in Idaho, please contact:

Captain Melissa Miller
Chief, 366th Wing Public Affairs
366 Gunfighter Avenue, Suite 152
Mountain Home, Idaho 83648-5291
Telephone: 208-828-6800
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Why Do We Need the Enhanced Training in Idaho Proposal?

Today, global threats come in a variety of shapes and sizes. The military services must be instantly ready to respond to these threats. Preparation is achieved through training and practice. The Enhanced Training in Idaho proposal would provide Mountain Home Air Force Base aircrews with local opportunities to realistically train for future conflicts.

Frequent Realistic Training

Frequent realistic training enhances the skills aircrews need today and in the future.

Training can be conducted more often when aircrews are allowed to stay closer to home. Local training maximizes the value of a fixed number of training hours. Enhanced Training in Idaho ensures the wise use of valuable training hours by converting travel time to training time.

Training realistically means that aircrews train the way they intend to fight. During actual conflicts, aircrews face a variety of

targets and threats. The components of the Enhanced Training in Idaho proposal (drop area, no-drop targets, and electronic emitter sites) would simulate real world scenarios and allow the aircrews to plan and practice complex missions.

Balancing Training with the Environment

Our goal is to balance realistic training with the environment and traditional land uses.

The Enhanced Training in Idaho proposal identifies three alternatives as proposed training areas. The Clover Butte, Juniper Butte, and Grasmere proposed sites all have the characteristics needed to provide realistic training areas. The land must be relatively flat and close to existing roads. Airspace above the land must be large enough to provide sufficient aircraft maneuvering room and flexible air operations.

Why, continued on page 4

Using Your Comments

Scoping was very productive. We have been able to adapt our proposal in response to your comments.

As an example, various proposed emitter sites were moved because of specific concerns regarding the potential presence of natural or cultural resources. These changes also ensure the visual beauty of the area remains.

Another change to the proposal includes the addition of another alternative. The Air Force and the Bureau of Land Management, a cooperating agency in the process, talked to many different individuals and groups

throughout scoping. Public comments led the Bureau of Land Management to recommend the Air Force look for another possible site for the 12,000 acre drop area farther east of the Bruneau-Jarbridge canyon area. We acted upon that recommendation.

The new alternative, referred to as the Juniper Butte site, is east of Three Creek Road and the proposed Clover Butte site. The Air Force examined this location and determined it could meet the operational requirements of the 366th Wing. This site would require about a two and one-half mile

Comments, continued on page 3

The NEPA Process: Scoping

This is the first in a series describing the phases of the National Environmental Policy Act (NEPA) process.

The scoping period for the Enhanced Training in Idaho proposal was open through August 1, 1996. Beginning with the Notice of Intent published in the Federal Register on January 29, 1996, this scoping period allowed interested members of the community to help identify issues, assist in defining the scope of analysis for the Environmental Impact Statement, and develop or improve alternatives for the proposal.

Eight public information meetings were held during the scoping phase. The purpose of these meetings was to have an open dialogue with community members, state and local officials, and representatives of environmental groups. In an open house format, members of the public had the opportunity to discuss specific concerns with representatives of the Air Force and the Bureau of Land Management. The meetings were held in Mountain Home, Bruneau, Boise, Three Creek, and Twin Falls, Idaho, and in Elko, Nevada, and Jordan Valley, Oregon. A total of 444 interested citizens attended the series of scoping meetings.

In June, the Air Force and the Shoshone-Paiute Tribal Council discussed the proposal and Native American concerns about the closeness of the proposed Grasmere site to the Duck Valley Reservation.



More than 400 comments were received during the 185-day scoping phase. Comments focused on noise issues, impacts to recreation and the environment, and the need to create additional alternatives. Following are the types of issues the public asked to have included in the analysis.

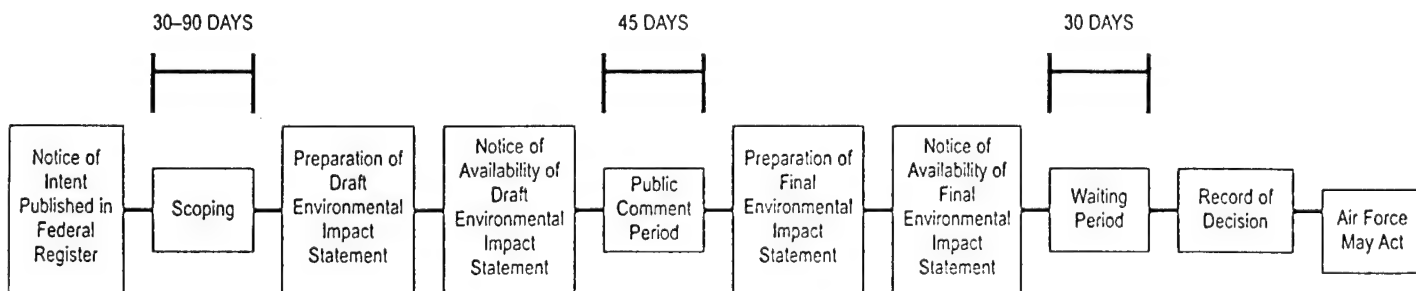
- Projections of number of flights, the noise levels associated with each event, and the elevations at which they will occur
- Use of the proposed range by other services and groups
- Impacts of the proposed range on road density and condition
- Effect of chaff in the proposed range on public health and safety, wildlife, water quality, and aesthetics of the affected area
- Effects of the proposal on Native American resources, activities, and traditional land uses



- Effect of the proposal on public access to recreational areas
- Effect of the training range on the local economy and cattle grazing
- Effects of the proposal on sensitive species, such as ferruginous hawks, California bighorn sheep, antelope and mule deer, sage grouse, bats, and migratory birds
- Risk of range fires from activities associated with the proposed training range

These and other scoping comments will be used to focus the Draft Environmental Impact Statement. ■

Where Are We Now? The EIS Timeline



Gray items indicate steps that have been completed.

Comments, continued from page 1

extension of the eastern boundary of the existing airspace to the Twin Falls County line. The Juniper Butte Alternative will be included and analyzed in the Environmental Impact Statement.

With your continued involvement in the Enhanced Training in Idaho proposal, the Air Force will be able to balance realistic training with the environment and traditional land uses. ■

An Overview of the National Environmental Policy Act

The National Charter for the Protection of the Environment

The National Environmental Policy Act is the national charter for protecting the environment and minimizing the impacts of federal actions. This law requires all federal agencies using federal resources or property to analyze potential environmental impacts of proposed actions and reasonable alternatives. The spirit and intent of the Act are to protect our nation's resources. Public involvement is an essential part of the process. The National Environmental Policy Act helps public officials make decisions with a clear understanding of the environmental consequences. Additionally, the Act helps the decision maker arrive at the best possible decision through the use of public comment and involvement.

Informed Decision Making

Informed decisions are based on a candid and factual presentation of environmental impacts. Reasonable alternatives must be analyzed and considered by the decision maker before a decision is made. Public involvement is of primary importance in complying with the National Environmental Policy Act, which demands a good-faith, hard look at the potential environmental

Overview, continued on page 4

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ETI Glossary

Composite Wing – A group of several different types of aircraft (fighters, tankers, and bombers) and their aircrews that train together, practicing realistic planning and tactics.

Drop Area – An area where aircraft drop small, non-explosive, training ordnance on targets.

Electronic Emitter – A radar transmitter that simulates an enemy threat (aircraft or weapon).

Electronic Emitter Site – A parking spot for an emitter.

Enhanced Training in Idaho (ETI) – The Air Force proposal to build a new training range and modify existing airspace so Mountain Home Air Force Base aircrews can train in realistic settings closer to home.

Environmental Impact Statement (EIS) – A federal document, prepared by the responsible federal official, in accordance with the National Environmental Policy Act of 1969 and the President's Council on Environmental Quality regulations. This document describes the environmental impacts of a proposed action.

Federal Register – A daily federal government publication that announces all proposed and final federal regulations. It also contains notices of public meetings and other events an agency may schedule.

National Environmental Policy Act (NEPA) – A United States statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment.

No-drop Target – An area of land over which aircrews practice aiming at targets, but do not release training ordnance.

Notice of Intent (NOI) – A public notice, published in the Federal Register and local newspapers, describing the proposed action and the intent to conduct an environmental impact analysis according to the National Environmental Policy Act.

Public Comment Period – The opportunity for the public to comment and ask questions about the proposal. Comment periods begin on the publication date of either the Notice of Intent or the Notice of Availability published in the Federal Register and local newspapers.

Record of Decision (ROD) – The decision document at the end of the Environmental Impact Statement process.

Scoping – The initial public involvement phase of the environmental impact analysis process. The public is asked to help determine the scope of issues to be addressed and to help identify significant environmental issues to be analyzed in depth. ■

Please Give Us Your Feedback!

Your feedback will allow us to give you the information you want and present it the way you want it. All you need to do is mark a few boxes, jot down a few thoughts if you'd like, cut out this card, and drop it in the mail.

This Newsletter Was:

- ☐ Very interesting ☐ Somewhat interesting ☐ Not of interest to me

The Information Was:

- ☐ Too simplistic ☐ Easy to understand ☐ Too difficult and technical

As For Future Newsletters:

- ☐ I want to hear more ☐ Please remove my name

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time. We do appreciate the feedback.

CUT HERE

Why, continued from page 1

All of these proposed sites are designed to minimize impacts to the environment and land use. Before proposing the Clover Butte and Grasmere sites, the Air Force screened the sites for environmental sensitivities. Areas of Critical Environmental Concern and Wilderness Study Areas were avoided. In proposing these sites, canyons, major roads and recreational areas, and private property were also considered. The Juniper Butte site was added later in the process as a result of comments received during the scoping period. Use of any of the proposed sites would take seasonal concerns into consideration.

Public Involvement in Shaping the Proposal

You have helped shape this training proposal.

Our responsibility is to keep the community informed and involved. Before we developed our proposal, we met with representatives of the Department of the Interior, the Bureau of Land Management, the state of Idaho, and the Shoshone-Paiute Tribes to discuss areas for possible use. We have also met with many groups throughout southern Idaho to discuss the training range concept.

The completed scoping meetings gave us the opportunity to talk with you about any issues you may have or alternatives you wish to suggest. We will continue to keep you informed through the media and products such as this newsletter. Additionally, we will ask for community involvement through public hearings during the public comment period following publication of the Draft Environmental Impact Statement. ■

U.S. Air Force / Bureau of Land Management

P.O. Box 329

Boise, Idaho 83701-0329

Overview, continued from page 3

impacts and a full and honest disclosure of impacts to the public. The environmental impact analysis process must be complete before proposed actions involving federal resources are implemented. The final decision concerning a proposed action is based on considerations such as mission objectives; technical requirements; federal environmental laws and regulations; local environmental laws, regulations, and values; and social impacts.

The Environmental Impact Statement

The Environmental Impact Statement is a detailed study that analyzes all environmental impacts of a proposed action and its reasonable alternatives. The Environmental Impact Statement contains a thorough discussion of all significant environmental impacts relating to the proposed action. This level of environmental analysis includes opportunities for extensive public involvement. The Environmental Impact Analysis process has several phases:

- Scoping
- Data collection
- Draft Environmental Impact Statement
- Public meetings/comment period
- Final Environmental Impact Statement
- Record of Decision

We will keep you informed as Enhanced Training in Idaho progresses through each of these phases. ■

In The Next Edition...

... An overview of the Bureau of Land Management involvement in the Enhanced Training in Idaho proposal
... The second article in the NEPA Process series — The Draft Environmental Impact Statement Analysis Process

A look at the people conducting the environmental impact analysis field work

Look for the next edition of the Enhanced Training in Idaho Newsletter in December.



What is ETI?

ETI stands for Enhanced Training in Idaho. Enhanced Training in Idaho is a proposal designed to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base in Idaho. This newsletter is the second of four scheduled to keep you informed about the Enhanced Training in Idaho proposal and the environmental impact analysis process. ■

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Bureau of Land Management Involvement: The Land Withdrawal Process

The Bureau of Land Management is a cooperating agency in the Enhanced Training in Idaho Environmental Impact Statement. The Bureau of Land Management's role is described below.

Land Withdrawal Application and the Engle Act

The Bureau of Land Management's main role as a cooperating agency is to make recommendations to Congress about the Department of Defense's land withdrawal application. Those recommendations are needed by Congress because of a law passed in 1958, called the Engle Act. It states that withdrawals of public land of more than 5,000 acres for defense purposes must be approved by Congress. Since the Enhanced

Training in Idaho withdrawal would be for approximately 12,000 acres, the Engle Act applies.

The Bureau of Land Management also has responsibilities for coordinating the withdrawal process, which is part of the Federal Land Policy and Management Act passed in 1976. The steps of the withdrawal process are being integrated as part of the environmental impact analysis outlined in the National Environmental Policy Act. The Bureau of Land Management and the Air Force are developing a joint Environmental Impact Statement that meets the requirements of the National Environmental Policy Act and the Federal Land Policy and Management Act.

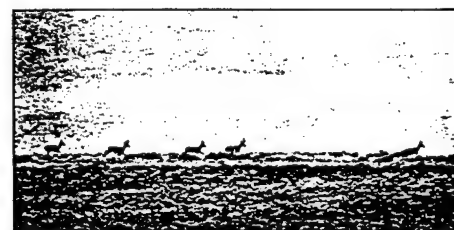
Involvement, continued on page 6

A Look at the Field Work

Specialists have been studying the land where the Air Force is proposing a new training range, no-drop targets, and electronic emitter sites. They have looked for important resources such as rare plants, animals, and birds. They also want to know if the areas may have special meaning to Native Americans. The following describes some of the work the specialists have done so far. Survey results will be included in the Draft Environmental Impact Statement.

Rare Plants

Ecologists or botanists perform rare plant surveys by identifying rare plant habitat first, then by searching for the rare plants themselves. The ecologist or botanist completes a Special Plant Observation Form for each rare plant population found and takes photographs for added documentation.



Pronghorn antelope are one of the species studied in the Draft Environmental Impact Study.

Big Game

Aerial surveys are conducted by a team of two biologists in fixed-wing aircraft. They record the location and the number of big game animals (mule deer, pronghorn antelope, and California bighorn sheep). The biologists also get information about big game from the Bureau of Land Management and Idaho Department of Fish and Game.

Field Work, continued on page 5

The NEPA Process: The Environmental Impact Analysis

This article is the second in a series describing the phases of the National Environmental Policy Act (NEPA) process. Future articles will cover the public hearing process and the final Environmental Impact Statement.

The environmental impact analysis process takes an objective look at potential impacts to the environment from proposed projects, such as Enhanced Training in Idaho. Each alternative in the Enhanced Training in Idaho proposal (Clover Butte, Grasmere, Juniper Butte, and the No-Action Alternative) is analyzed.

All potential environmental impacts are identified, and the significance of each impact is assessed. The starting point for measuring impacts begins with data about current environmental and operational conditions. All of the analyses conducted use currently accepted methods and are scientifically reproducible. The results from the analyses are published in the Draft Environmental Impact Statement.

Agency Assistance

The Air Force, as the lead agency on the Environmental Impact Statement, has been working with several agencies to conduct the environmental impact analysis. The Bureau of Land Management, the Federal Aviation Administration, and various Idaho state organizations, such as the Department of Fish and Game, the Division of Environmental Quality, and the State Historic Preservation Office, assist in the process by gathering existing environmental data, providing technical expertise in their areas of focus, and evaluating individual studies.

Other agencies and organizations, including the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service, have also provided input for analysis.

Regions of Influence

For a complex environmental study such as this one, the Air Force is looking at three specific study areas, otherwise known as Regions of Influence. This focused approach, developed with the concurrence of the Bureau of Land Management and the state of Idaho, identifies specific areas of land to be studied along with the degree of analysis that will be conducted (from intensive on-site field surveys to literature reviews).

Region of Influence One: A close look is taken at the three alternative sites (Clover Butte, Grasmere, or Juniper Butte) for the 12,000-acre drop area, the 640-acre no-drop target, the 5-acre no-drop targets, the 1-acre and 0.25-acre electronic emitter sites, roads, and power line corridors. These areas would be directly affected by ground disturbance. Field work, data collection and analysis, as well as examination of existing data, documents, and literature, are conducted for these areas. For example, surveys for cultural resources are performed in select or random areas in Region of Influence One.

Region of Influence Two: Data collection and analysis is conducted for those areas with the potential for concentrated aircraft overflight and electronic emitter activity. This would include some areas below the proposed Military Operating Areas and proposed Restricted

Resource Areas

The Regions of Influence analysis focuses on 12 resource areas.

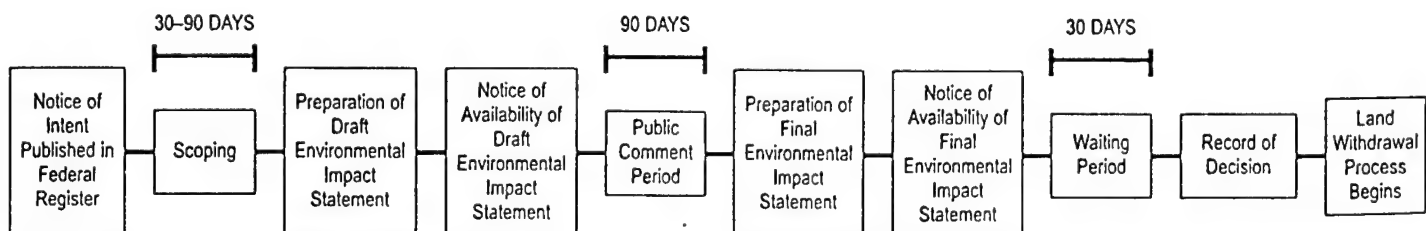
- Airspace
- Noise
- Safety
- Hazardous Materials and Solid Waste
- Earth Resources
- Water Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Land Use and Transportation
- Recreation and Visual Resources
- Socioeconomics

The intensity of analysis in areas where ground disturbance would occur (Region of Influence One) will be much greater than the intensity of analysis in those areas where aircraft overflights would occur.

Airspace, as well as land near and/or surrounding the Region of Influence One sites. Limited field work for specific topics may occur. For example, some aerial surveys for big game will take place this winter.

Region of Influence Three: Research concentrating on literature reviews and published research findings is conducted for the remaining lands under the Military Operations Areas not included in Region of Influence Two. ■

Where Are We Now? The EIS Timeline



Gray items indicate steps that have been completed.

What are the Components of the Enhanced Training in Idaho Proposal?

The Enhanced Training in Idaho proposal would provide Mountain Home Air Force Base aircrews with enhanced local opportunities to train realistically for future conflict. This article describes the land, airspace, and construction required to provide realistic training scenarios.

Drop Area

The largest land mass required for the proposal is a 12,000-acre drop area. Aircraft would drop small (25 pound), non-explosive, training ordnance on only 300 acres of the 12,000-acre area. On a recurring basis, all dropped training ordnance would be picked up and recycled, leaving the area clean of debris. Training ordnance would not be dropped during the height of fire season.

The entire 12,000-acre drop area would be fenced. Four target complexes would be built inside the drop area. One complex, a simulated industrial target, would be constructed to look like a factory complex from the air, but from the ground would appear like silos and other buildings used for agricultural operations. Two simulated surface-to-air missile sites would be constructed inside the area. Life-size plastic replicas of battle tanks and trucks would also be placed inside the area to provide realistic targets.

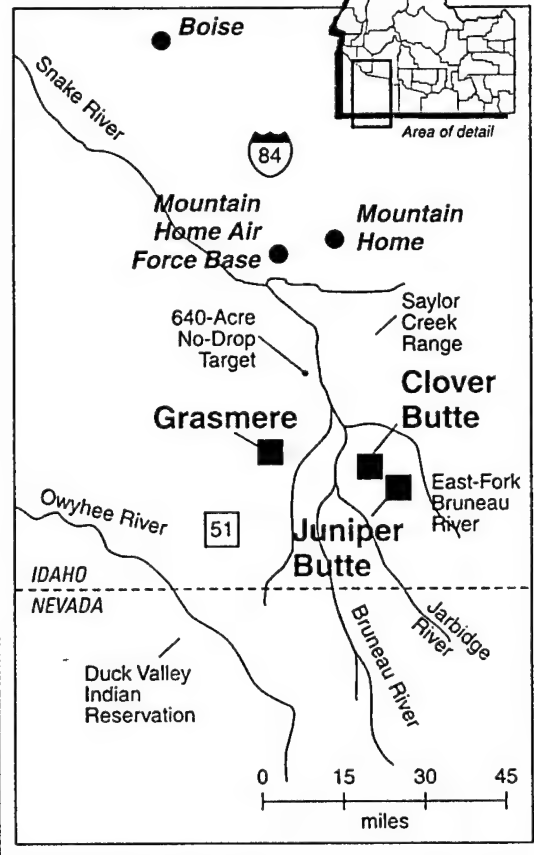
The four target areas within the drop area (a total of approximately 300 acres) would be fenced to exclude livestock. Livestock would still be able to graze in the rest of the 12,000-acre area.

No-Drop Targets

No-drop targets are areas where aircrews practice aiming at targets, but do not release their training ordnance. Each of the five proposed no-drop targets would be fenced.

One of the no-drop targets would cover 640 acres, and placed within this area would be approximately 200 life-size plastic battle tanks and trucks. These targets would be

ETI's Three Alternatives for the 12,000-Acre Drop Area



The Air Force would select only one 12,000-acre drop area.

rearranged periodically within the 640-acre area. The movement would provide a variety of target configurations for the aircrews. Livestock would still be able to graze within the 640-acre site.

Four 5 acre no-drop targets would also be constructed. The targets within these four areas would include simulated surface-to-air missiles, simulated early warning radars, and two small simulated industrial complexes. As in the drop area, these industrial complexes would not be actual buildings.

Electronic Emitter Sites

The proposal also requires 30 small sites that would be used to support mobile electronic

emitters. All emitter sites are spaced at a minimum of two miles apart. Typically, five to eight sites would be used at any one time.

Electronic emitters are radar transmitters that simulate an enemy aircraft or weapon. These emitters are mounted on trucks and transported to and from the emitter sites. Portable diesel generators to power the emitters are transported on or behind the trucks. The smaller emitters, typically used on 0.25-acre sites, are on pickup trucks. The larger emitters, used at 1-acre sites, are on semi-trailers.

Ten emitter sites would be fenced areas of one acre each. Included within each acre would be an above-ground double-walled fuel storage tank (used to store diesel fuel for powering the emitter), a 400-square foot building and a 40-foot communication tower. This tower would be used for communicating with the personnel at Mountain Home Air Force Base who oversee range training.

The other 20 sites would each be 0.25 acre in size. These sites would contain a gravel-surfaced parking spot and a gravel driveway that runs from the existing road to the site. These sites would not have buildings or a fence.

Few of these sites would be used at one time, so the land would remain open to the public as it is today.

Using mobile electronic emitters provides the Air Force with a modern way to simulate enemy threats while maintaining a balance with the environment and traditional land use. Mobile emitters provide realistic scenarios — as in real life, the threat can be moved just as an enemy would move during an actual conflict. The simulated battle takes place electronically between the emitter and the pilot's radar screen. Since the emitters are mounted on trucks, the land required for the emitter would be small.

Components, continued on page 4

Components, continued from page 3

Site Alternatives

Three alternatives for locating the 12,000-acre drop area and the four 5-acre no-drop targets are proposed. The proposed 640-acre no-drop target location would be the same for all three alternatives. The proposed locations of the electronic emitter sites would also be the same for all three alternatives.

The Proposed 640-Acre No-Drop Target

The proposed 640-acre no-drop target is located less than three miles east of Saylor Creek Range and as pictured on the map shown on page 3.

Proposed Electronic Emitter Sites

The 30 proposed electronic emitter sites are spaced along each side of Highway 51 and Three Creek Road.

- The 15 emitter sites along Highway 51 begin 14 miles southwest of Bruneau and end 8 miles north of the Idaho/Nevada border. The proposed emitter sites along

Highway 51 are spaced at least 100 yards from the road with the farthest site located 8 miles west of the highway:

- The 15 emitter sites along Three Creek Road begin 17 miles southeast of Bruneau and end 12 miles north of the Idaho/Nevada border. Fourteen of the emitter sites along Three Creek Road are placed 200 yards to three miles from the road. The fifteenth emitter site is located 14 miles northeast of the road.

The Proposed 12,000-Acre Drop Areas

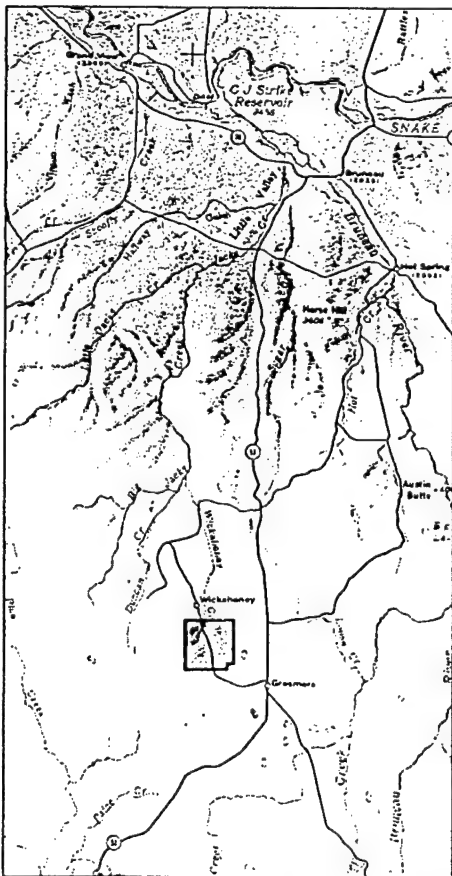
Each alternative 12,000-acre drop area would be complemented by the 640-acre no-drop target and four 5-acre geographically separated no-drop targets. Following are maps showing the location of the 12,000-acre drop areas for the Grasmere, Clover Butte, and Juniper Butte alternatives.

Proposed Airspace Changes

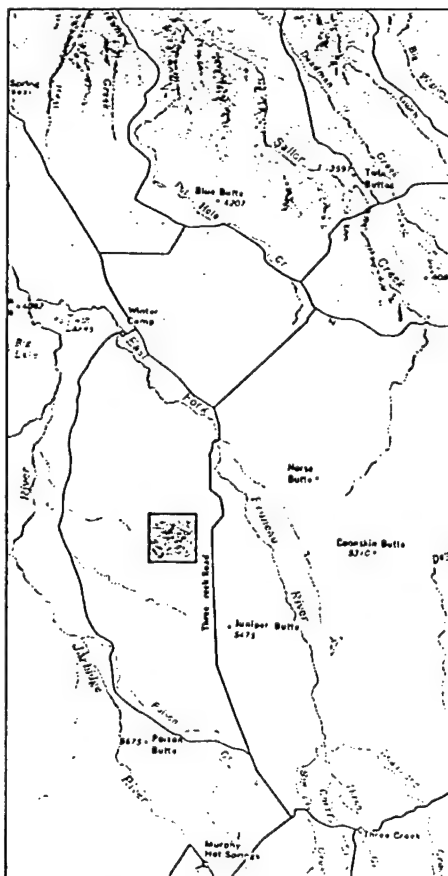
The proposed expanded airspace (see map on page 5), part of the Enhanced Training in Idaho proposal, would balance realistic train-

ing with the environment and traditional land uses through the following:

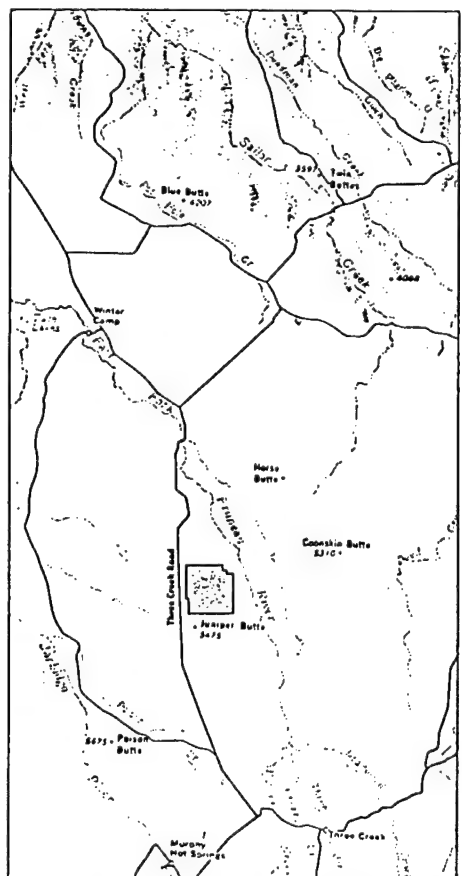
- Aircraft noise would be dispersed. This is because the current shape of the airspace limits our ability to equally distribute the training throughout the Military Operations Area. The current shape of the airspace creates a "bottleneck" (narrowing in the middle) between the town of Grasmere, Idaho, and the Duck Valley Indian Reservation. This concentrates the effects of flying activities in a small area over the Owyhee Canyonlands and throughout the area within the bottleneck. The additional airspace would give aircrews room to maneuver their aircraft making full use of the existing airspace. The effects of flying activities would no longer be concentrated in any location.
- Operations would be enhanced. The airspace changes would allow for better air-to-air and air-to-ground training, because the current shape of the Military Operations Area does not allow full use of the airspace. Large portions of the air-



Grasmere Alternative



Clover Butte Alternative



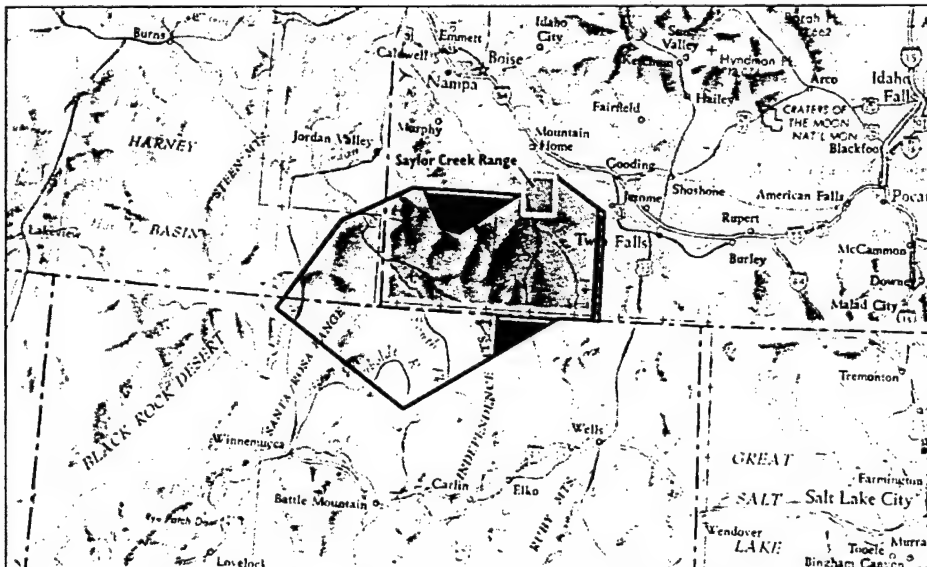
Juniper Butte Alternative

space are currently unusable for some training activities. Aircrews presently must limit the directions from which they approach the range. They also must limit where they conduct most training activities.

The advantage of the proposed airspace is more realistic training. The proposal would provide the ability to practice the skills needed in future conflicts, such as approaching targets from

multiple directions. The proposal would also allow aircrews to fully use the significant capabilities of the modern aircraft systems.

- Flexibility would be increased both operationally and in our ability to balance the competing demands of the area. The selected additional airspace would allow full use of the airspace for all training activities. It would also add flexibility and allow our operations to address some seasonal concerns.
- Restricted airspace would be restructured. The current restricted airspace, south of Saylor Creek Range, would be eliminated. It would be replaced with restricted airspace around the proposed 12,000-acre drop area. Additionally, this proposed change would allow general aviation pilots greater freedom of navigation to transit southeastern Owyhee County. ■



The shaded blue areas indicate additional airspace proposed for ETI.

Field Work, continued from page 1



Biologists use live traps to collect small mammals like this deer mouse. They mark and recapture the animal to roughly estimate population and density of the species in a given area.

Raptors and Upland Game Birds

Teams of two biologists conduct walking surveys for raptors (golden eagles and red-tailed hawks) and upland game birds (sage grouse and chukar). Each team searches for raptors in canyonlands with one biologist walking at the bottom of the canyon and one biologist walking along the canyon edge. For upland game birds, the biologists walk through potential habitat, such as sagebrush stands. The location, species, number, and behavior of raptors and upland game birds are recorded.

This winter, aerial surveys for raptors will be conducted in potential habitat areas.

Cultural and Native American Traditional Uses

Archaeologists consult with the Shoshone-Paiute tribes of the Duck Valley Indian Reservation and review historic documents to help identify resources that have special meaning to Native American peoples. These resources can include cultural, earth, water, biological, and other resources. Consultations are designed to identify and reduce possible impacts to resources that are part of Native American beliefs and traditions.

Field surveys are conducted for archaeological and architectural resources. One or more survey teams inspect the ground by walking approximately 30 meters apart. If evidence of a cultural resource is found, the survey crew defines the boundaries of the resource by walking 2 to 5 meters apart. The locations of artifacts and features are recorded using the Global Positioning System — a satellite-based system for determining the precise location of something on the earth. ■



Survey teams walk 30 meters apart, searching for evidence of cultural resources.



When a potential cultural resource is found, team members record the exact location using the Global Positioning System.

Involvement, continued from page 1

The Withdrawal Process

The basic steps of the land withdrawal process are outlined below.

Step 1: Application

The withdrawal process begins with an application to the Bureau of Land Management.

Enhanced Training in Idaho: On March 29, 1996, the U.S. Air Force filed an application with the Bureau of Land Management's Idaho State Office requesting withdrawal of land for the Enhanced Training in Idaho proposal.

Step 2: Notice of Proposed Withdrawal

When the application is received, a Notice of Proposed Withdrawal and Opportunity for Public Meeting is published in the Federal Register.

Enhanced Training in Idaho: On April 8, 1996, the Bureau of Land Management published the Notice of Proposed Withdrawal and Opportunity for Public Meeting in the Federal Register. Copies of the notice were published in several newspapers in Idaho.

Step 3: Public Comment Period

The Federal Register notice begins a 90-day comment period and the requirement for one or more public meetings. The Bureau of Land Management gathers public comments as a means for helping to define the scope of the issues associated with the proposal.

Enhanced Training in Idaho: The U.S. Air Force, assisted by the Bureau of Land Management, gathered comments about the land withdrawal in a series of eight scoping meetings held in June and July of 1996. Meetings were held in Boise, Bruneau, Mountain Home, Three Creek, and Twin Falls, Idaho; Jordan Valley, Oregon; and Elko, Nevada.

Step 4: Environmental Analysis

Following submission of the initial land withdrawal application, an environmental analysis is conducted. Reports developed for the withdrawal application include:

- evidence of public meetings and public involvement in the environmental review process,
- identification of present land use and the impacts of the proposed use,
- the need for acquiring water rights,
- identification of cultural resources,
- identification of wilderness areas,
- a mineral resource analysis,
- a biological assessment of any listed or proposed endangered or threatened species and their critical habitat,
- a wetlands inventory, and
- the economic impact of the proposed uses of the withdrawn land.

Enhanced Training in Idaho: The Bureau of Land Management requires a thorough investigation of all the public land proposed for withdrawal. In the Enhanced Training in Idaho proposal, the drop area will receive special attention. Most of the individual reports will be included as appendices to the Environmental Impact Statement. Because of the confidential nature of the Cultural Resources Report, only a summary of this report will appear in the Environmental Impact Statement.

Step 5: Management Plan

The Department of Defense prepares a plan that describes how it will use and manage the resources on the proposed withdrawn public land. It is called a Resource Management Plan, but is not to be confused with the land use planning documents of the same name that are common in the Bureau of Land Management.

Enhanced Training in Idaho: A strategy for the Management Plan will be prepared and included with the Environmental Impact Statement. A detailed Management Plan for the proposed withdrawn public land will be prepared if Congress approves the withdrawal.

Step 6: Land Report

The Bureau of Land Management prepares a Land Report summarizing the

issues involved with the proposed withdrawal. This report includes:

- evaluation of the issues,
- a conclusion drawn from the evaluation, and
- a recommended specific course of action.

The Land Report is forwarded to the Bureau of Land Management's Washington, D. C., headquarters office and to the Department of Defense. It is used by the Secretary of the Interior, the Director of the Bureau of Land Management, and their staffs to reach an independent opinion about whether the land should be withdrawn for defense purposes.

Enhanced Training in Idaho: The Land Report will be prepared in conjunction with the Final Environmental Impact Statement and will accompany the withdrawal legislation.

Step 7: Congressional Approval

The Bureau of Land Management, in conjunction with the Department of Defense, finalizes a draft version of the legislation to be submitted to Congress. If it is passed by Congress and signed by the President, the public lands will be withdrawn.

Federal Land Policy and Management Act Timeline

Many of the steps for land withdrawal and the Environmental Impact Statement occur concurrently. For example, public meetings for the land withdrawal and for the environmental impact analysis can be held at the same time. The analysis required to determine environmental impacts for the National Environmental Policy Act can also be used in a similar analysis for the Resource Management Plan.

For More Information

If you would like to review the application for land withdrawal submitted by the U.S. Air Force for the Enhanced Training in Idaho proposal, contact Mr. Jon Foster, (208) 373-3813. ■

ETI Glossary

Airspace — The space above the earth. The Federal Aviation Administration has jurisdiction over all the airspace in the United States. This agency identifies special airspace areas that may be used for military flight activity.

Bureau of Land Management — A U.S. Department of Interior agency with the responsibility of managing public lands.

Drop Area — An area where aircraft drop small, non-explosive, training ordnance on targets.

Electronic Emitter — A radar, either mounted on a truck or stationary inside a fenced area, that simulates an enemy threat (aircraft or weapon).

Electronic Emitter Site — An area developed to park an electronic emitter.

Engle Act — The 1958 congressional act that states that withdrawals of public land of more than 5,000 acres for defense purposes must be approved by Congress.

Enhanced Training in Idaho (ETI) — The Air Force proposal to build a new training range and modify existing airspace so Mountain Home Air Force Base aircrews can train in realistic settings closer to home.

Environmental Impact Statement (EIS) — A federal document, prepared by the responsible federal official, in accordance with the National Environmental Policy Act of 1969 and the President's Council on Environmental Quality regulations. This document describes the environmental impacts of a proposed federal action.

Federal Land Policy and Management Act (FLPMA) — The 1976 congressional act that outlines the land withdrawal process.

Federal Register — A daily federal government publication that announces all proposed and final federal regulations. It also contains notices of public meetings and other events agencies may schedule.

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Land Withdrawal — The withholding of an area of public land from settlement, sale, location, or entry. This process transfers jurisdiction over an area of federal land from one department, bureau or agency to another department, bureau, or agency.

Military Operations Area (MOA) — Areas of airspace designated by the Federal Aviation Administration for special military use. Military Operations Areas were developed to isolate military training areas in a controlled and predictable location. The use of Military Operations Areas is usually scheduled for only a few hours each day. Military Operations Areas are always open to commercial and general aviation traffic on a see-and-avoid basis.

Military Training Route (MTR) — A long, low-altitude corridor that serves as a flight path to a particular destination. The corridor width, length, and height (ceiling and floor) vary from route to route.

National Environmental Policy Act (NEPA) — A U.S. statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment.

No-drop Target — An area of land over which aircrews practice aiming at targets, but do not release training ordnance.

Public Lands — Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

Regions of Influence (ROI) — The three study areas that determine the intensity of analysis for the environmental impact study. Studies in Region of Influence One, the areas in each proposed alternative where ground disturbance would occur, will focus on intense analysis of the 12 resource areas. Studies in Region of Influence Two, the areas in each proposed alternative where aircraft overflight would occur, will focus on limited field work of the 12 resource areas. Studies in Region of Influence Three, the areas in each proposed alternative next to Region of Influence Two, will focus on literature reviews of the 12 resource areas.

Restricted Area — Airspace designated by the Federal Aviation Administration within which the flight of aircraft is subject to restriction. When training is taking place, non-participating aircraft are restricted. Restricted Areas in the United States are generally located above training ranges. ■

Would you like a copy of the Draft Environmental Impact Statement?

The Enhanced Training in Idaho Draft Environmental Impact Statement will be ready for distribution in the spring of 1997. By indicating your preference and mailing this card, you will receive a copy of the Community Report or the entire Draft Environmental Impact Statement. To help you decide, a brief description of each document follows.

- **Community Report** — Written in magazine format, the Community Report tells the story of Enhanced Training in Idaho in less than 100 pages. It describes the environment of southwestern Idaho, the type of training the Air Force is proposing, and the projected environmental impacts.
- **Draft Environmental Impact Statement** — The draft Environmental Impact Statement contains in-depth descriptions of the proposed action and alternatives, quantitative and qualitative analyses, technical descriptions of the environment, and projected environmental impacts of implementing the Enhanced Training in Idaho proposal. The draft Environmental Impact Statement features about 600 pages of text, data tables, graphs, appendices, and literature citations.

Please send me: ☐ Community Report ☐ Draft Environmental Impact Statement

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time.

CUT HERE

In The Next Edition...

... A description of the Enhanced Training in Idaho noise analysis

... A discussion of some of your subjects of interest

... The third article in the NEPA Process series — The Public Hearing Process

Look for the next edition of the *Enhanced Training in Idaho* newsletter in April.

U.S. Air Force / Bureau of Land Management

P.O. Box 329

Boise, Idaho 83701-0329

Attachment E
Public Hearing Materials



FACT SHEET

ENHANCED TRAINING IN IDAHO

Airspace Proposal

Three of the most commonly asked questions about the Enhanced Training in Idaho airspace proposal are listed below.

Why do you need this extra airspace?

Increased airspace allows us to balance realistic training with the environment and traditional land uses. Some examples of the balance include the following.

1. The current vertical and horizontal airspace restricts air-to-air training, and the number of aircraft that can use the airspace at any one time. In the existing airspace, a bottleneck (a narrowing in the middle) exists along the eastern one-third of the Owyhee Military Operations Area and ends east of Highway 51 near Grasmere. This bottleneck is caused by the limited airspace between the current northern border and the Duck Valley Reservation. Because of this narrowing, the air traffic is concentrated in a small area over the Owyhee Canyons and between Riddle and Grasmere. The additions on the northern, southern, and eastern (alternative D only) boundaries of the existing airspace give the aircrews additional room to maneuver toward the targets from many directions and angles. Aircraft would disperse because they have more room to maneuver.
2. Increasing the airspace on the northern and southern boundaries would allow the Air Force to address seasonal concerns. An example of a seasonal concern would be moving air activity away from wildlife habitat during sensitive periods. With this increased airspace, air activity would be dispersed over the entire area, rather than the current concentration of flights over the

Owyhee and Sheep Creek Military Operations Areas. This increased airspace would also provide the flexibility to temporarily move air activity from one area to another.

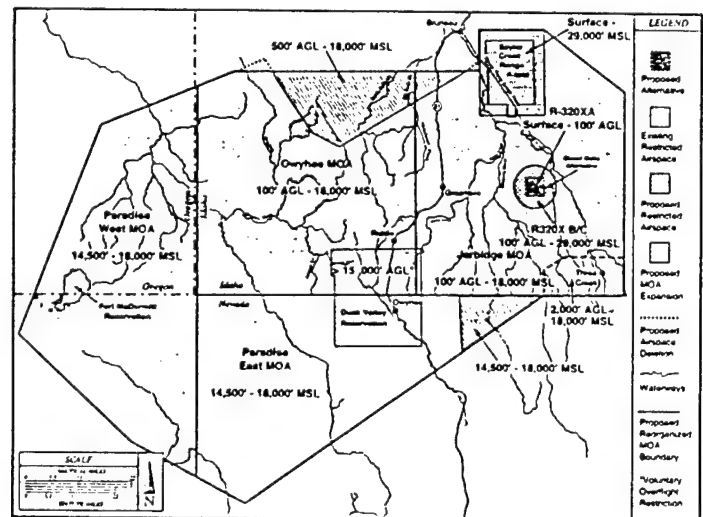


Figure 1. Alternative B Proposed Airspace Structure, Clover Butte Range

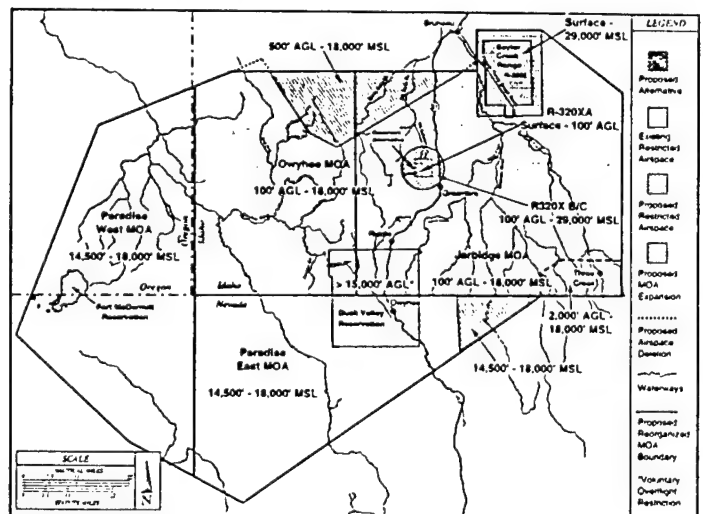


Figure 2. Alternative C Proposed Airspace Structure, Grasmere Range

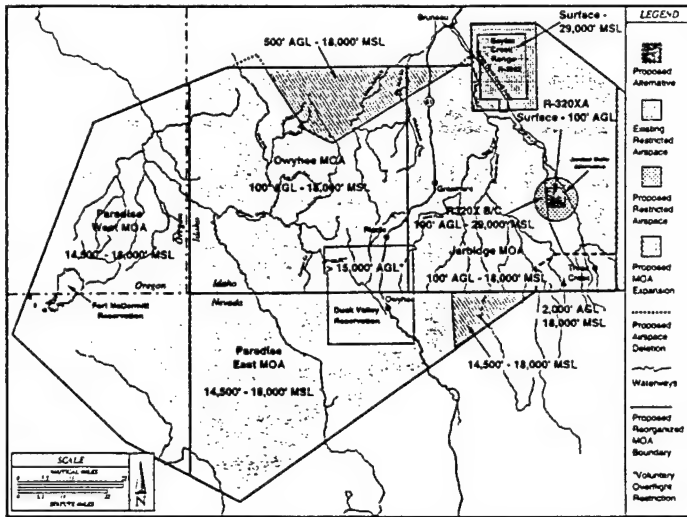


Figure 3. Alternative D Proposed Airspace Structure, Juniper Butte Range

Where will you be flying?

Enhanced Training in Idaho proposes aircrews fly throughout the entire Military Operations Areas. A description of where we fly is provided below.

1. Most of the training flights are at high altitudes. It is forecast that more than 68% of the training flights would take place higher than 10,000 feet above the ground. It is also forecast that fewer than 21% of the training flights would take place below 1,000 feet. The remainder of training flights would take place between 1,000 and 10,000 feet.
2. Flight operations would continue to take place throughout the Mountain Home training airspace, just as they have since World War II. The flights would be dispersed throughout the entire training area and not restricted to following specific routes. Current flying activities normally begin at midmorning and end in the early evening on

Monday through Thursday. Friday flying is normally completed by early afternoon. The 366th Wing rarely trains on weekends. These hours of operation would remain the same under the Enhanced Training in Idaho proposal.

3. In order to balance training needs with the needs of other users, the 366th Wing has designated areas that aircrews now avoid. Examples of this cooperation include the following.

- Aircrews of the 366th Wing do not fly in canyons.
- All training flights take place above 500 feet.
- Active airstrips within the airspace are avoided.

The Air Force's goal is to balance realistic training with the environment and traditional land uses.

Will the noise from air activity increase?

The noise analysis indicates that the noise levels in the MOAs would generally remain the same or decrease in all but two areas if Enhanced Training in Idaho is implemented. Noise levels would increase in the triangular piece of airspace that would be added to the north and in the proposed restricted airspace for the selected alternative (see Figures 1, 2, and 3). Details of the noise analysis are presented in the draft Environmental Impact Statement.

How can the public comment?

If you would like to comment on these issues, please send your comments to:

U.S. Air Force/Bureau of Land Management
Post Office Box 329
Boise, Idaho 83701-0329



DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO

Here is a list of places where you can review a copy of the
Enhanced Training in Idaho
Draft Environmental Impact Statement

In Idaho:

American Falls District Library
Arco - Lost Rivers Community Library
Blackfoot - Lucy Doyle Public Library
Boise - Ada County District Library
Boise - Bureau of Land Management, District Office
Boise - Bureau of Land Management, Idaho State Office
Boise - Idaho Governor's Office
Boise - Idaho Legislative Library
Boise - Idaho State Library
Boise Public Library
Boise State University Library
Buhl Public Library
Burley Public Library
Caldwell - Albertson College Library
Caldwell Public Library
Coeur d' Alene Public Library
Eagle Public Library
Emmett Public Library
Fairfield - Camas County Elementary School Library
Filer Public Library
Fort Hall - Shoshone-Bannock Library
Glenns Ferry Public Library
Gooding Public Library
Grand View - East Owyhee County Library
Hailey Public Library
Homedale Public Library
Idaho City - Boise Basin Library District
Idaho Falls Public Library
Jerome Public Library
Ketchum - Community Library Association
Kimberly Public Library
Kuna School Community Library
Marsing - Lizard Butte District Library
McCall Public Library
Meridian District Library
Middleton Public Library
Moscow - University of Idaho Library
Mountain Home AFB Library

Mountain Home City Council
Mountain Home Public Library
Murphy - Owyhee County Courthouse
Nampa Public Library
Payette Public Library
Pocatello - Eli M. Oboler Library
Pocatello - Idaho Museum of Natural History
Pocatello Public Library
Post Falls Public Library
Rupert - Demary Memorial Library
Shoshone - Bureau of Land Management District Office
Shoshone District Library
Twin Falls - Bureau of Land Management
Twin Falls - College of Southern Idaho
Twin Falls Public Library
Weiser Public Library

In Nevada:

Carson City - Nevada State Clearinghouse
Elko District Office
Owyhee - Duck Valley Reservation
Winnemucca - Bureau of Land Management
Winnemucca - Humboldt County Library

In Oregon:

Burns - Harney County Library
Jordan Valley City Hall
Ontario - Malheur County Library
Salem - Oregon State Library
Vale Public Library

In Virginia:

Headquarters, Air Combat Command at Langley AFB

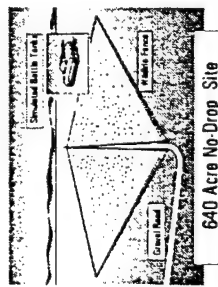
In Washington, DC

Bureau of Land Management
Headquarters, U.S. Air Force

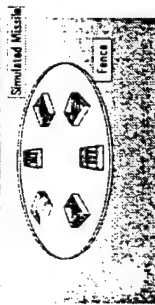


ENHANCED TRAINING IN IDAHO

The Proposal Provides Environmental Balance And Realistic Training With Minimum Use Of Land



640 Acre No-Drop Site



5 Acre No-Drop Surface-to-Air Missile Site

No-Drop Targets

Features of the no-drop targets include:

- No ordnance dropped -- aiming and tactics practiced only
- Fenced

No-drop targets consists of:

- One 640 acre (1 ml. x 1 ml.) no-drop target
 - 200 life-size plastic or fiberglass battle tanks or trucks
 - Targets rearranged monthly within the 640 acre area
- Four 5 acre (466 ft. x 466 ft. or 283 ft. radius) no-drop targets
 - Simulated surface-to-air missile sites with life-size plastic replicas
 - Simulated early warning radar site with 3 barns and 4 radars
 - Two small industrial complexes with barns simulating industrial buildings and grain silos simulating storage tanks
 - Too small for grazing

Drop Area

An area where aircraft drop small non-explosive, training ordnance on targets

Drop Area

Features of the drop area include:

- Small (25 pounds) non-explosive training ordnance only
- All training ordnance recycled
- No training ordnance dropped during height of fire season
- All training events will ensure training ordnance remains in drop area

The drop target area consists of:

- One 12,000 acre (4.3 ml. x 4.3 ml.) drop area
 - Perimeter fenced for human safety
 - Usable for grazing
 - Four targets fenced to protect cattle
 - less than 300 acres
 - industrial target
 - two Surface-to-Air Missile (SAM) sites
 - battle tanks and trucks

No-Drop Targets

Where aircrews practice aiming at targets, but do not release training ordnance

Electronic Emitter Sites

Sites to place and support simulated threat emitters and equipment

Electronic Emitter Sites

Features of the electronic emitter site include:

- Emitters powered by portable generators
- Sites within 1 mile of existing road
- Gravel-surfaced parking spots
- Gravel driveway from existing road to site

Emitter sites consists of:

- Ten 1 acre (208 ft. x 208 ft.) emitter sites
 - Fenced
 - Above-ground double walled fuel storage tank
 - 400 sq. ft. building
 - 40 ft. monopole tower (as required)
- Twenty 0.25 acre (28 ft. radius) emitter sites
 - No fence
 - No buildings

Land Acquisition

The land will be acquired by withdrawal, right-of-ways, and leasing

Land Acquisition

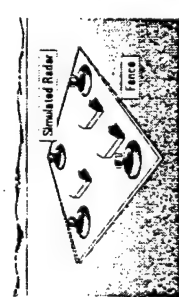
Land acquisition depends on land ownership.

We will:

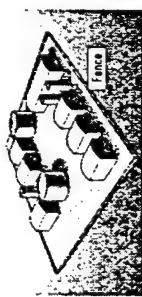
- Withdraw public land according to the Federal Land Policy and Management Act and the Eagle Act
- Use right-of-ways on public lands
- Lease state of Idaho lands

No private lands are involved in this proposal

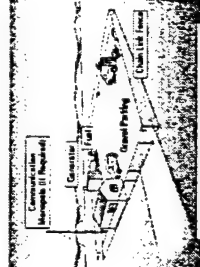
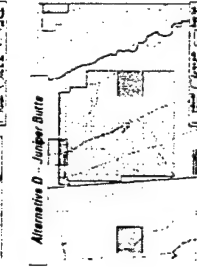
We will work with traditional land users to develop multi-use options



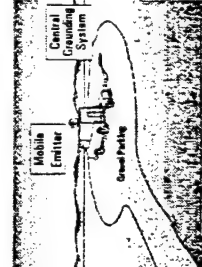
5 Acre No-Drop Early Warning Radar Site



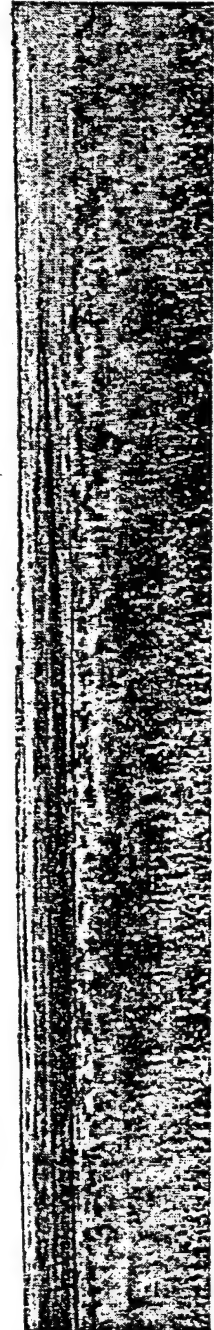
5 Acre No-Drop Industrial Complex



1.0 Acre Emitter Site



0.25 Acre Emitter Site





DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO



Above: 388th Wing over Egypt
Right: Homecoming

Frequent Realistic Training
Enhances The Skills Aircrews
Will Need in The Future

Local training maximizes the value of
a fixed number of training hours

Funding limits the number of hours aircrews
can fly. These hours apply to time on the training
range and time spent travel to the training range.

We must use these hours wisely by:

- Converting travel time to training time
- Training locally
- Training Realistically
- Training as a composite wing

*Enhanced Training in Idaho ensures the wise
use of our valuable training hours.*



Building skills for the future

Enhanced Training in Idaho gives us the
capabilities to:

- Conduct local composite wing training
- Simulate real world scenarios (flexibility)
- Plan and practice complex missions to include:
 - using several targets at the same time
 - approaching any single target with several aircraft from many directions
 - using precision timing in rapid succession
 - responding to simulated enemy threats (electronic emitters at different locations)

To accomplish this, the proposal includes:

- A Drop area
- No-Drop targets
- Electronic emitter sites

*Drop area - an area where aircraft drop small,
non-explosive, training ordnance on a target.*

*No-Drop target - aircrews practice aiming at
targets but do not release training ordnance.*

*Electronic emitter site - parking spot for
an emitter*

Realistic training means aircrews

train the way they intend to fight --
facing a variety of targets and threats





DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO



Above left: Grassland near Grasmere. Above right: Aircraft maneuvering over target.

We identified the proposed locations by considering the following:

Land:

- Suitable terrain (relatively flat) to accommodate range operations
- Close to existing roads

Airspace:

- Sufficient aircraft maneuvering room
- Drop and No-Drop targets separated to provide flexible air operations

Using these and other characteristics, we can create a realistic training range to train our aircrews.

Our Goal Is To Balance Realistic Training With The Environment And Traditional Land Use

Characteristics of the Clover Butte, Grasmere, and Juniper Butte alternatives provide realistic training areas

Alternative locations are designed to minimize impacts to the environment and land use



Top Left: Cow Grazing. Bottom Left: Railways. Above Right: Sage grouse.

As a first step to minimize impact, we considered the following:

- Areas of Critical Environmental Concern
- Canyons
- Grazing
- Known cultural resources
- Major roads and recreation areas
- Private property
- Wilderness study areas

We will continue to work with the people of Idaho, Native Americans, and Government agencies to study and analyze these and other resources for the Final Environmental Impact Statement.





DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO



Public Scoping June 1996.

Public Scoping meetings were held in eight locations with 444 citizens in attendance

A review of public input resulted in:

- Identification of Alternative D (Juniper Butte)
- Relocation of No-Drop Target and Emitter Sites
- Development of Internet Web Site--
<http://air.gri.gatech.edu/airsochp/airsochp.htm>
or link through- www.mountainhome.af.mil
- Focusing the Draft Environmental Impact Statement

Idaho Statesman
News Clips
United States Air Force

Air Force Bureau to options

Public Involvement Helps Shape This Training Proposal

Public scoping led to new choices

Your comments on the analysis
ensure all impacts are known

You can comment by mail or at public hearings:

Mail:

U.S. Air Force/Bureau of Land Management
P.O. Box 329
Boise, Idaho 83701-0329

Public Hearings:

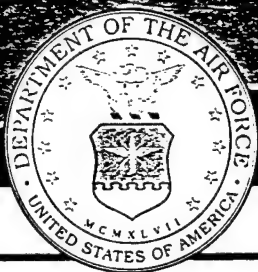
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SUN	MON	TUE	WED	THU	FRI	SAT
		1 Public Hearing Boise, Idaho	2 Public Hearing Boise, Idaho	3 Public Hearing Boise, Idaho	4 Public Hearing Boise, Idaho	5 Public Hearing Boise, Idaho
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		26 Public Hearing Boise, Idaho	27 Public Hearing Boise, Idaho	28 Public Hearing Boise, Idaho	29 Public Hearing Boise, Idaho	30 Public Hearing Boise, Idaho
		31 Public Hearing Boise, Idaho				

Draft Environmental Impact Statements
are available for review at your local repository
Comments accepted through August 6, 1997

Following the comment period:

- All comments and responses published in final Environmental Impact Statement
- Submit to Environmental Protection Agency
- Notice of Availability
- 30-day waiting period
- Record of Decision





What is ETI?

ETI stands for Enhanced Training in Idaho. Enhanced Training in Idaho is a proposal that is designed to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base in Idaho. This newsletter is one of four scheduled to keep you informed about the Enhanced Training in Idaho proposal and the environmental impact analysis process. ■

Want To Know More?

If you have questions or need more information on Enhanced Training in Idaho, please contact:

Captain Melissa Miller
Chief, 366th Wing Public Affairs
366 Gunfighter Avenue, Suite 152
Mountain Home, Idaho 83648-5291
Telephone: 208-828-6800
Fax: 208-828-4205

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Why Do We Need the Enhanced Training in Idaho Proposal?

Today, global threats come in a variety of shapes and sizes. The military services must be instantly ready to respond to these threats. Preparation is achieved through training and practice. The Enhanced Training in Idaho proposal would provide Mountain Home Air Force Base aircrews with local opportunities to realistically train for future conflicts.

Frequent Realistic Training

Frequent realistic training enhances the skills aircrews need today and in the future.

Training can be conducted more often when aircrews are allowed to stay closer to home. Local training maximizes the value of a fixed number of training hours. Enhanced Training in Idaho ensures the wise use of valuable training hours by converting travel time to training time.

Training realistically means that aircrews train the way they intend to fight. During actual conflicts, aircrews face a variety of

targets and threats. The components of the Enhanced Training in Idaho proposal (drop area, no-drop targets, and electronic emitter sites) would simulate real world scenarios and allow the aircrews to plan and practice complex missions.

Balancing Training with the Environment

Our goal is to balance realistic training with the environment and traditional land uses.

The Enhanced Training in Idaho proposal identifies three alternatives as proposed training areas. The Clover Butte, Juniper Butte, and Grasmere proposed sites all have the characteristics needed to provide realistic training areas. The land must be relatively flat and close to existing roads. Airspace above the land must be large enough to provide sufficient aircraft maneuvering room and flexible air operations.

Why, continued on page 4

Using Your Comments

Scoping was very productive. We have been able to adapt our proposal in response to your comments.

As an example, various proposed emitter sites were moved because of specific concerns regarding the potential presence of natural or cultural resources. These changes also ensure the visual beauty of the area remains.

Another change to the proposal includes the addition of another alternative. The Air Force and the Bureau of Land Management, a cooperating agency in the process, talked to many different individuals and groups

throughout scoping. Public comments led the Bureau of Land Management to recommend the Air Force look for another possible site for the 12,000 acre drop area farther east of the Bruneau-Jarbridge canyon area. We acted upon that recommendation.

The new alternative, referred to as the Juniper Butte site, is east of Three Creek Road and the proposed Clover Butte site. The Air Force examined this location and determined it could meet the operational requirements of the 366th Wing. This site would require about a two and one-half mile

Comments, continued on page 3

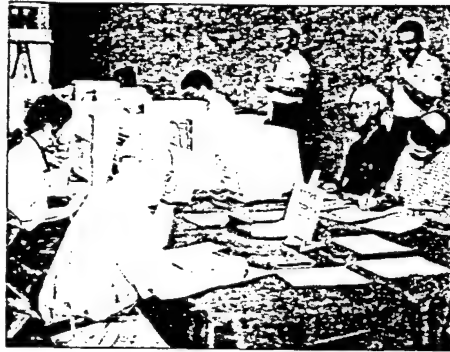
The NEPA Process: Scoping

This is the first in a series describing the phases of the National Environmental Policy Act (NEPA) process.

The scoping period for the Enhanced Training in Idaho proposal was open through August 1, 1996. Beginning with the Notice of Intent published in the Federal Register on January 29, 1996, this scoping period allowed interested members of the community to help identify issues, assist in defining the scope of analysis for the Environmental Impact Statement, and develop or improve alternatives for the proposal.

Eight public information meetings were held during the scoping phase. The purpose of these meetings was to have an open dialogue with community members, state and local officials, and representatives of environmental groups. In an open house format, members of the public had the opportunity to discuss specific concerns with representatives of the Air Force and the Bureau of Land Management. The meetings were held in Mountain Home, Bruneau, Boise, Three Creek, and Twin Falls, Idaho, and in Elko, Nevada, and Jordan Valley, Oregon. A total of 444 interested citizens attended the series of scoping meetings.

In June, the Air Force and the Shoshone-Paiute Tribal Council discussed the proposal and Native American concerns about the closeness of the proposed Grasmere site to the Duck Valley Reservation.



More than 400 comments were received during the 185-day scoping phase. Comments focused on noise issues, impacts to recreation and the environment, and the need to create additional alternatives. Following are the types of issues the public asked to have included in the analysis.

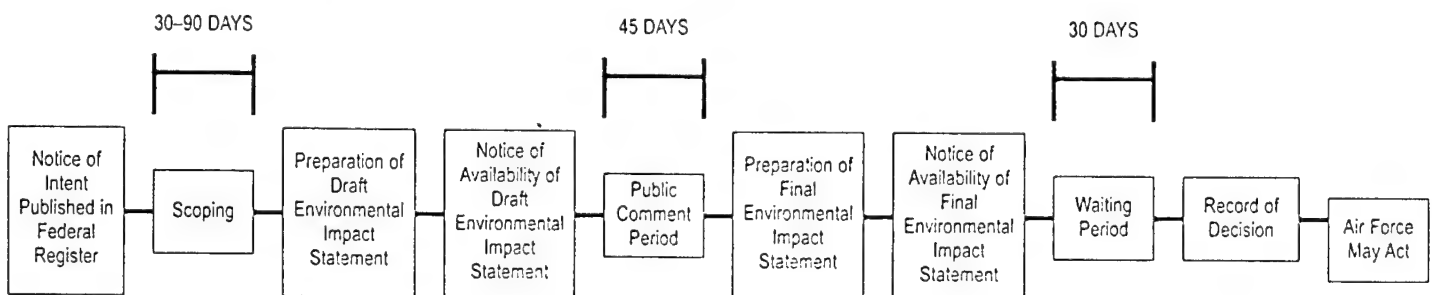
- Projections of number of flights, the noise levels associated with each event, and the elevations at which they will occur
- Use of the proposed range by other services and groups
- Impacts of the proposed range on road density and condition
- Effect of chaff in the proposed range on public health and safety, wildlife, water quality, and aesthetics of the affected area
- Effects of the proposal on Native American resources, activities, and traditional land uses



- Effect of the proposal on public access to recreational areas
- Effect of the training range on the local economy and cattle grazing
- Effects of the proposal on sensitive species, such as ferruginous hawks, California bighorn sheep, antelope and mule deer, sage grouse, bats, and migratory birds
- Risk of range fires from activities associated with the proposed training range

These and other scoping comments will be used to focus the Draft Environmental Impact Statement. ■

Where Are We Now? The EIS Timeline



Comments, continued from page 1

extension of the eastern boundary of the existing airspace to the Twin Falls County line. The Juniper Butte Alternative will be included and analyzed in the Environmental Impact Statement.

With your continued involvement in the Enhanced Training in Idaho proposal, the Air Force will be able to balance realistic training with the environment and traditional land uses. ■

An Overview of the National Environmental Policy Act

The National Charter for the Protection of the Environment

The National Environmental Policy Act is the national charter for protecting the environment and minimizing the impacts of federal actions. This law requires all federal agencies using federal resources or property to analyze potential environmental impacts of proposed actions and reasonable alternatives. The spirit and intent of the Act are to protect our nation's resources. Public involvement is an essential part of the process. The National Environmental Policy Act helps public officials make decisions with a clear understanding of the environmental consequences. Additionally, the Act helps the decision maker arrive at the best possible decision through the use of public comment and involvement.

Informed Decision Making

Informed decisions are based on a candid and factual presentation of environmental impacts. Reasonable alternatives must be analyzed and considered by the decision maker before a decision is made. Public involvement is of primary importance in complying with the National Environmental Policy Act, which demands a good-faith, hard look at the potential environmental

Overview, continued on page 4

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ETI Glossary

Composite Wing – A group of several different types of aircraft (fighters, tankers, and bombers) and their aircrews that train together, practicing realistic planning and tactics.

Drop Area – An area where aircraft drop small, non-explosive, training ordnance on targets.

Electronic Emitter – A radar transmitter that simulates an enemy threat (aircraft or weapon).

Electronic Emitter Site – A parking spot for an emitter.

Enhanced Training in Idaho (ETI) – The Air Force proposal to build a new training range and modify existing airspace so Mountain Home Air Force Base aircrews can train in realistic settings closer to home.

Environmental Impact Statement (EIS) – A federal document, prepared by the responsible federal official, in accordance with the National Environmental Policy Act of 1969 and the President's Council on Environmental Quality regulations. This document describes the environmental impacts of a proposed action.

Federal Register – A daily federal government publication that announces all proposed and final federal regulations. It also contains notices of public meetings and other events an agency may schedule.

National Environmental Policy Act (NEPA) – A United States statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment.

No-drop Target – An area of land over which aircrews practice aiming at targets, but do not release training ordnance.

Notice of Intent (NOI) – A public notice, published in the Federal Register and local newspapers, describing the proposed action and the intent to conduct an environmental impact analysis according to the National Environmental Policy Act.

Public Comment Period – The opportunity for the public to comment and ask questions about the proposal. Comment periods begin on the publication date of either the Notice of Intent or the Notice of Availability published in the Federal Register and local newspapers.

Record of Decision (ROD) – The decision document at the end of the Environmental Impact Statement process.

Scoping – The initial public involvement phase of the environmental impact analysis process. The public is asked to help determine the scope of issues to be addressed and to help identify significant environmental issues to be analyzed in depth. ■

Please Give Us Your Feedback!

Your feedback will allow us to give you the information you want and present it the way you want it. All you need to do is mark a few boxes, jot down a few thoughts if you'd like, cut out this card, and drop it in the mail.

This Newsletter Was:

- ☐ Very interesting ☐ Somewhat interesting ☐ Not of interest to me

The Information Was:

- ☐ Too simplistic ☐ Easy to understand ☐ Too difficult and technical

As For Future Newsletters:

- ☐ I want to hear more ☐ Please remove my name

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time. We do appreciate the feedback.

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Why, continued from page 1

All of these proposed sites are designed to minimize impacts to the environment and land use. Before proposing the Clover Butte and Grasmere sites, the Air Force screened the sites for environmental sensitivities. Areas of Critical Environmental Concern and Wilderness Study Areas were avoided. In proposing these sites, canyons, major roads and recreational areas, and private property were also considered. The Juniper Butte site was added later in the process as a result of comments received during the scoping period. Use of any of the proposed sites would take seasonal concerns into consideration.

Public Involvement in Shaping the Proposal

You have helped shape this training proposal.

Our responsibility is to keep the community informed and involved. Before we developed our proposal, we met with representatives of the Department of the Interior, the Bureau of Land Management, the state of Idaho, and the Shoshone-Paiute Tribes to discuss areas for possible use. We have also met with many groups throughout southern Idaho to discuss the training range concept.

The completed scoping meetings gave us the opportunity to talk with you about any issues you may have or alternatives you wish to suggest. We will continue to keep you informed through the media and products such as this newsletter. Additionally, we will ask for community involvement through public hearings during the public comment period following publication of the Draft Environmental Impact Statement. ■

U.S. Air Force / Bureau of Land Management

P.O. Box 329

Boise, Idaho 83701-0329

Overview, continued from page 3

impacts and a full and honest disclosure of impacts to the public. The environmental impact analysis process must be complete before proposed actions involving federal resources are implemented. The final decision concerning a proposed action is based on considerations such as mission objectives; technical requirements; federal environmental laws and regulations; local environmental laws, regulations, and values; and social impacts.

The Environmental Impact Statement

The Environmental Impact Statement is a detailed study that analyzes all environmental impacts of a proposed action and its reasonable alternatives. The Environmental Impact Statement contains a thorough discussion of all significant environmental impacts relating to the proposed action. This level of environmental analysis includes opportunities for extensive public involvement. The Environmental Impact Analysis process has several phases:

- Scoping
- Data collection
- Draft Environmental Impact Statement
- Public meetings/comment period
- Final Environmental Impact Statement
- Record of Decision

We will keep you informed as Enhanced Training in Idaho progresses through each of these phases. ■

In The Next Edition...

... An overview of the Bureau of Land Management involvement in the Enhanced Training in Idaho proposal

The second article in the NEPA Process series — The Draft Environmental Impact Statement Analysis Process

A look at the people conducting the environmental impact analysis field work

Look for the next edition of the Enhanced Training in Idaho Newsletter in December.



What is ETI?

ETI stands for Enhanced Training in Idaho. Enhanced Training in Idaho is a proposal designed to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base in Idaho. This newsletter is the second of four scheduled to keep you informed about the Enhanced Training in Idaho proposal and the environmental impact analysis process. ■

Want to Know More?

If you have questions or need more information on Enhanced Training in Idaho, please contact:

Captain Melissa Miller
Chief, 366th Wing Public Affairs
366 Gunfighter Avenue, Suite 152
Mountain Home, Idaho 83648-5291
Telephone: 208-828-6800
Fax: 208-828-4205 ■

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Bureau of Land Management Involvement: The Land Withdrawal Process

The Bureau of Land Management is a cooperating agency in the Enhanced Training in Idaho Environmental Impact Statement. The Bureau of Land Management's role is described below.

Land Withdrawal Application and the Engle Act

The Bureau of Land Management's main role as a cooperating agency is to make recommendations to Congress about the Department of Defense's land withdrawal application. Those recommendations are needed by Congress because of a law passed in 1958, called the Engle Act. It states that withdrawals of public land of more than 5,000 acres for defense purposes must be approved by Congress. Since the Enhanced

Training in Idaho withdrawal would be for approximately 12,000 acres, the Engle Act applies.

The Bureau of Land Management also has responsibilities for coordinating the withdrawal process, which is part of the Federal Land Policy and Management Act passed in 1976. The steps of the withdrawal process are being integrated as part of the environmental impact analysis outlined in the National Environmental Policy Act. The Bureau of Land Management and the Air Force are developing a joint Environmental Impact Statement that meets the requirements of the National Environmental Policy Act and the Federal Land Policy and Management Act.

Involvement, continued on page 6

A Look at the Field Work

Specialists have been studying the land where the Air Force is proposing a new training range, no-drop targets, and electronic emitter sites. They have looked for important resources such as rare plants, animals, and birds. They also want to know if the areas may have special meaning to Native Americans. The following describes some of the work the specialists have done so far. Survey results will be included in the Draft Environmental Impact Statement.

Rare Plants

Ecologists or botanists perform rare plant surveys by identifying rare plant habitat first, then by searching for the rare plants themselves. The ecologist or botanist completes a Special Plant Observation Form for each rare plant population found and takes photographs for added documentation.



Pronghorn antelope are one of the species studied in the Draft Environmental Impact Study.

Big Game

Aerial surveys are conducted by a team of two biologists in fixed-wing aircraft. They record the location and the number of big game animals (mule deer, pronghorn antelope, and California bighorn sheep). The biologists also get information about big game from the Bureau of Land Management and Idaho Department of Fish and Game.

Field Work, continued on page 5

The NEPA Process: The Environmental Impact Analysis

This article is the second in a series describing the phases of the National Environmental Policy Act (NEPA) process. Future articles will cover the public hearing process and the final Environmental Impact Statement.

The environmental impact analysis process takes an objective look at potential impacts to the environment from proposed projects, such as Enhanced Training in Idaho. Each alternative in the Enhanced Training in Idaho proposal (Clover Butte, Grasmere, Juniper Butte, and the No-Action Alternative) is analyzed.

All potential environmental impacts are identified, and the significance of each impact is assessed. The starting point for measuring impacts begins with data about current environmental and operational conditions. All of the analyses conducted use currently accepted methods and are scientifically reproducible. The results from the analyses are published in the Draft Environmental Impact Statement.

Agency Assistance

The Air Force, as the lead agency on the Environmental Impact Statement, has been working with several agencies to conduct the environmental impact analysis. The Bureau of Land Management, the Federal Aviation Administration, and various Idaho state organizations, such as the Department of Fish and Game, the Division of Environmental Quality, and the State Historic Preservation Office, assist in the process by gathering existing environmental data, providing technical expertise in their areas of focus, and evaluating individual studies.

Other agencies and organizations, including the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service, have also provided input for analysis.

Regions of Influence

For a complex environmental study such as this one, the Air Force is looking at three specific study areas, otherwise known as Regions of Influence. This focused approach, developed with the concurrence of the Bureau of Land Management and the state of Idaho, identifies specific areas of land to be studied along with the degree of analysis that will be conducted (from intensive on-site field surveys to literature reviews).

Region of Influence One: A close look is taken at the three alternative sites (Clover Butte, Grasmere, or Juniper Butte) for the 12,000-acre drop area, the 640-acre no-drop target, the 5-acre no-drop targets, the 1-acre and 0.25-acre electronic emitter sites, roads, and power line corridors. These areas would be directly affected by ground disturbance. Field work, data collection and analysis, as well as examination of existing data, documents, and literature, are conducted for these areas. For example, surveys for cultural resources are performed in select or random areas in Region of Influence One.

Region of Influence Two: Data collection and analysis is conducted for those areas with the potential for concentrated aircraft overflight and electronic emitter activity. This would include some areas below the proposed Military Operating Areas and proposed Restricted

Resource Areas

The Regions of Influence analysis focuses on 12 resource areas.

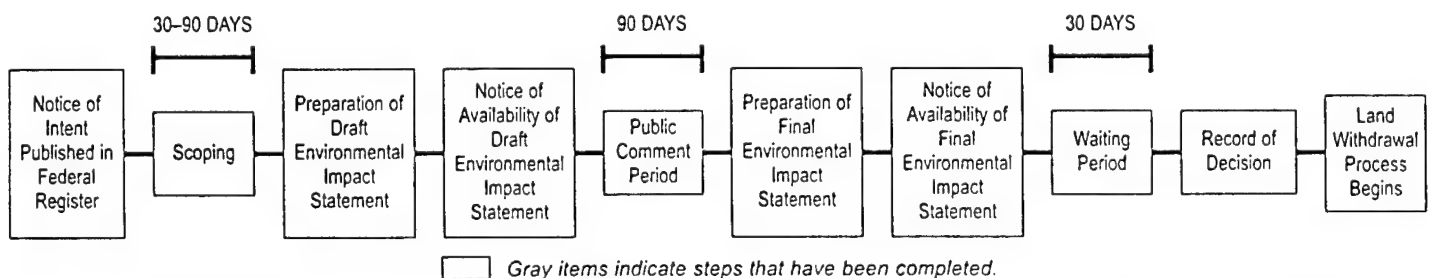
- Airspace
- Noise
- Safety
- Hazardous Materials and Solid Waste
- Earth Resources
- Water Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Land Use and Transportation
- Recreation and Visual Resources
- Socioeconomics

The intensity of analysis in areas where ground disturbance would occur (Region of Influence One) will be much greater than the intensity of analysis in those areas where aircraft overflights would occur.

Airspace, as well as land near and/or surrounding the Region of Influence One sites. Limited field work for specific topics may occur. For example, some aerial surveys for big game will take place this winter.

Region of Influence Three: Research concentrating on literature reviews and published research findings is conducted for the remaining lands under the Military Operations Areas not included in Region of Influence Two. ■

Where Are We Now? The EIS Timeline



What are the Components of the Enhanced Training in Idaho Proposal?

The Enhanced Training in Idaho proposal would provide Mountain Home Air Force Base aircrews with enhanced local opportunities to train realistically for future conflict. This article describes the land, airspace, and construction required to provide realistic training scenarios.

Drop Area

The largest land mass required for the proposal is a 12,000-acre drop area. Aircraft would drop small (25 pound), non-explosive, training ordnance on only 300 acres of the 12,000-acre area. On a recurring basis, all dropped training ordnance would be picked up and recycled, leaving the area clean of debris. Training ordnance would not be dropped during the height of fire season.

The entire 12,000-acre drop area would be fenced. Four target complexes would be built inside the drop area. One complex, a simulated industrial target, would be constructed to look like a factory complex from the air, but from the ground would appear like silos and other buildings used for agricultural operations. Two simulated surface-to-air missile sites would be constructed inside the area. Life-size plastic replicas of battle tanks and trucks would also be placed inside the area to provide realistic targets.

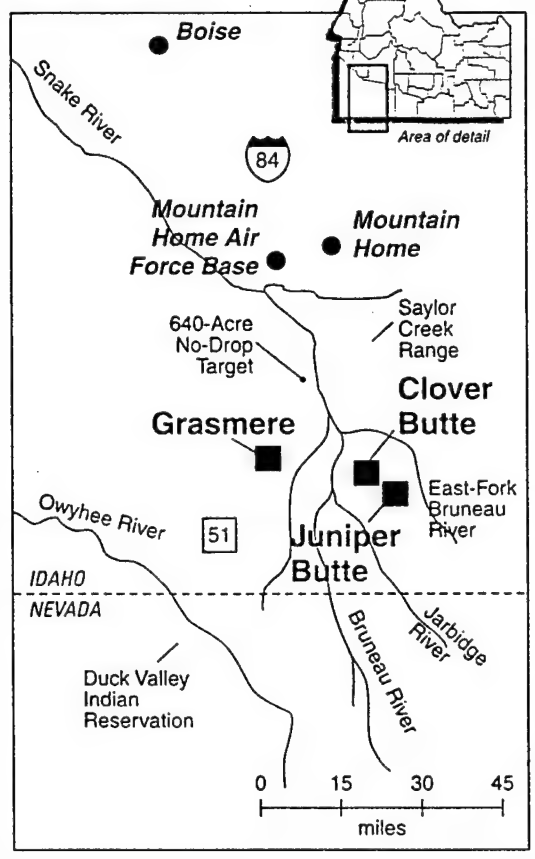
The four target areas within the drop area (a total of approximately 300 acres) would be fenced to exclude livestock. Livestock would still be able to graze in the rest of the 12,000-acre area.

No-Drop Targets

No-drop targets are areas where aircrews practice aiming at targets, but do not release their training ordnance. Each of the five proposed no-drop targets would be fenced.

One of the no-drop targets would cover 640 acres, and placed within this area would be approximately 200 life-size plastic battle tanks and trucks. These targets would be

ETI's Three Alternatives for the 12,000-Acre Drop Area



The Air Force would select only one 12,000-acre drop area.

rearranged periodically within the 640-acre area. The movement would provide a variety of target configurations for the aircrews. Livestock would still be able to graze within the 640-acre site.

Four 5 acre no-drop targets would also be constructed. The targets within these four areas would include simulated surface-to-air missiles, simulated early warning radars, and two small simulated industrial complexes. As in the drop area, these industrial complexes would not be actual buildings.

Electronic Emitter Sites

The proposal also requires 30 small sites that would be used to support mobile electronic

emitters. All emitter sites are spaced at a minimum of two miles apart. Typically, five to eight sites would be used at any one time.

Electronic emitters are radar transmitters that simulate an enemy aircraft or weapon. These emitters are mounted on trucks and transported to and from the emitter sites. Portable diesel generators to power the emitters are transported on or behind the trucks. The smaller emitters, typically used on 0.25-acre sites, are on pickup trucks. The larger emitters, used at 1-acre sites, are on semi-trailers.

Ten emitter sites would be fenced areas of one acre each. Included within each acre would be an above-ground double-walled fuel storage tank (used to store diesel fuel for powering the emitter), a 400-square foot building and a 40-foot communication tower. This tower would be used for communicating with the personnel at Mountain Home Air Force Base who oversee range training.

The other 20 sites would each be 0.25 acre in size. These sites would contain a gravel-surfaced parking spot and a gravel driveway that runs from the existing road to the site. These sites would not have buildings or a fence.

Few of these sites would be used at one time, so the land would remain open to the public as it is today.

Using mobile electronic emitters provides the Air Force with a modern way to simulate enemy threats while maintaining a balance with the environment and traditional land use. Mobile emitters provide realistic scenarios — as in real life, the threat can be moved just as an enemy would move during an actual conflict. The simulated battle takes place electronically between the emitter and the pilot's radar screen. Since the emitters are mounted on trucks, the land required for the emitter would be small.

Components, continued on page 4

Components, continued from page 3

Site Alternatives

Three alternatives for locating the 12,000-acre drop area and the four 5-acre no-drop targets are proposed. The proposed 640-acre no-drop target location would be the same for all three alternatives. The proposed locations of the electronic emitter sites would also be the same for all three alternatives.

The Proposed 640-Acre No-Drop Target

The proposed 640-acre no-drop target is located less than three miles east of Saylor Creek Range and as pictured on the map shown on page 3.

Proposed Electronic Emitter Sites

The 30 proposed electronic emitter sites are spaced along each side of Highway 51 and Three Creek Road.

- The 15 emitter sites along Highway 51 begin 14 miles southwest of Bruneau and end 8 miles north of the Idaho/Nevada border. The proposed emitter sites along

Highway 51 are spaced at least 100 yards from the road with the farthest site located 8 miles west of the highway.

- The 15 emitter sites along Three Creek Road begin 17 miles southeast of Bruneau and end 12 miles north of the Idaho/Nevada border. Fourteen of the emitter sites along Three Creek Road are placed 200 yards to three miles from the road. The fifteenth emitter site is located 14 miles northeast of the road.

The Proposed 12,000-Acre Drop Areas

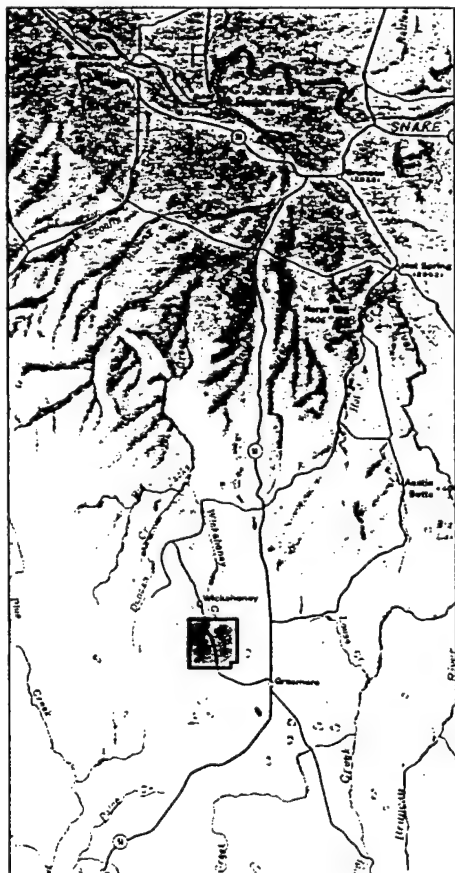
Each alternative 12,000-acre drop area would be complemented by the 640-acre no-drop target and four 5-acre geographically separated no-drop targets. Following are maps showing the location of the 12,000-acre drop areas for the Grasmere, Clover Butte, and Juniper Butte alternatives.

Proposed Airspace Changes

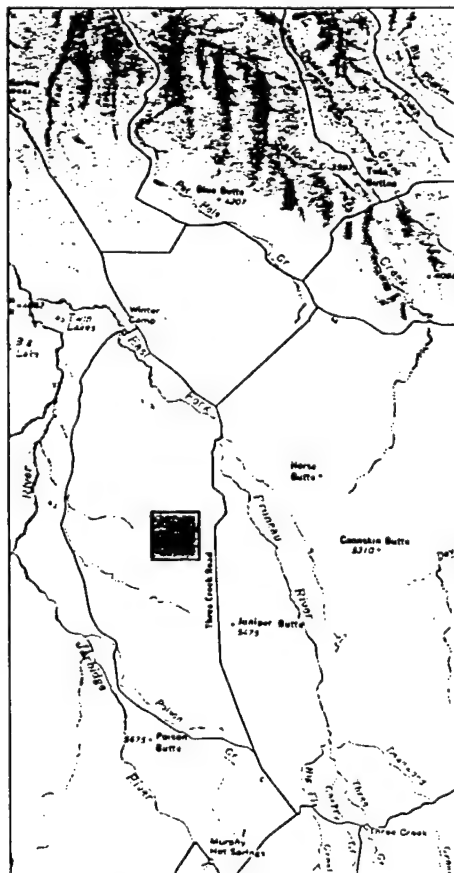
The proposed expanded airspace (see map on page 5), part of the Enhanced Training in Idaho proposal, would balance realistic train-

ing with the environment and traditional land uses through the following:

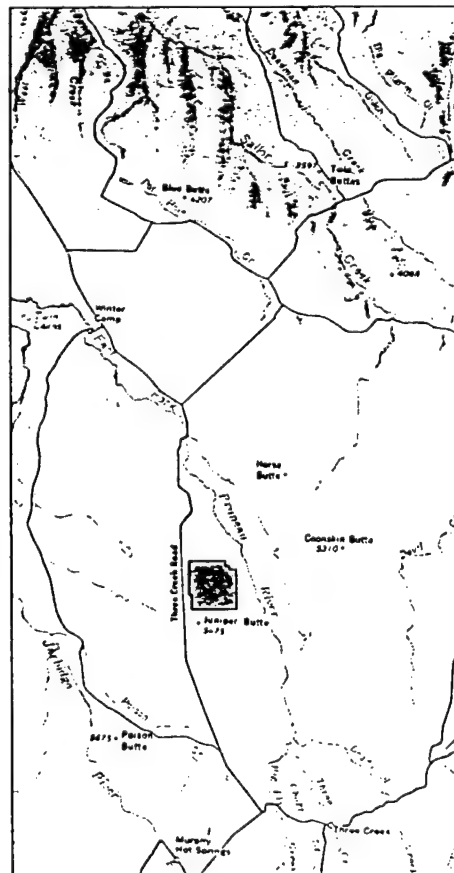
- Aircraft noise would be dispersed. This is because the current shape of the airspace limits our ability to equally distribute the training throughout the Military Operations Area. The current shape of the airspace creates a "bottleneck" (narrowing in the middle) between the town of Grasmere, Idaho, and the Duck Valley Indian Reservation. This concentrates the effects of flying activities in a small area over the Owyhee Canyonlands and throughout the area within the bottleneck. The additional airspace would give aircrews room to maneuver their aircraft making full use of the existing airspace. The effects of flying activities would no longer be concentrated in any location.
- Operations would be enhanced. The airspace changes would allow for better air-to-air and air-to-ground training, because the current shape of the Military Operations Area does not allow full use of the airspace. Large portions of the air-



Grasmere Alternative



Clover Butte Alternative



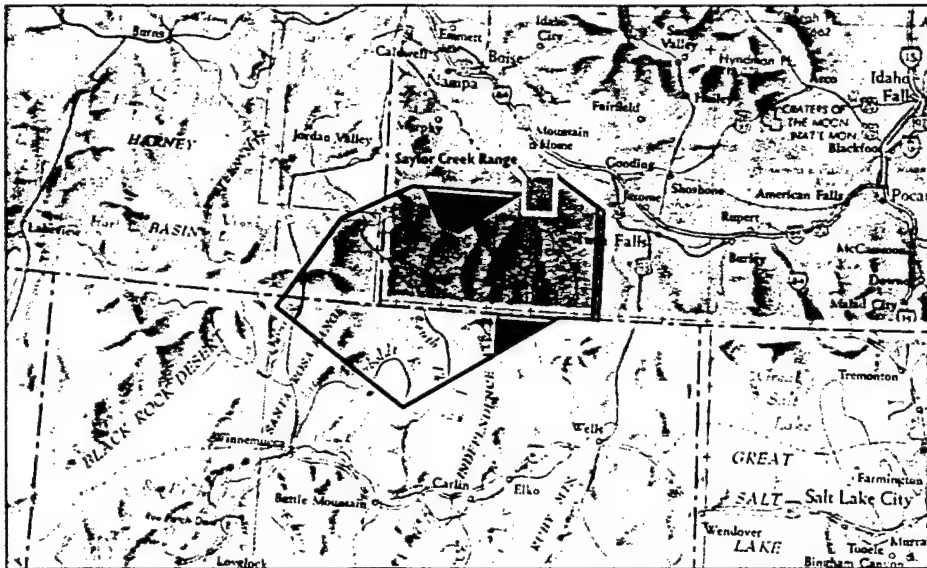
Juniper Butte Alternative

space are currently unusable for some training activities. Aircrews presently must limit the directions from which they approach the range. They also must limit where they conduct most training activities.

The advantage of the proposed airspace is more realistic training. The proposal would provide the ability to practice the skills needed in future conflicts, such as approaching targets from

multiple directions. The proposal would also allow aircrews to fully use the significant capabilities of the modern aircraft systems.

- Flexibility would be increased both operationally and in our ability to balance the competing demands of the area. The selected additional airspace would allow full use of the airspace for all training activities. It would also add flexibility and allow our operations to address some seasonal concerns.
- Restricted airspace would be restructured. The current restricted airspace, south of Saylor Creek Range, would be eliminated. It would be replaced with restricted airspace around the proposed 12,000-acre drop area. Additionally, this proposed change would allow general aviation pilots greater freedom of navigation to transit southeastern Owyhee County. ■



The shaded blue areas indicate additional airspace proposed for ETI.

Field Work, continued from page 1



Biologists use live traps to collect small mammals like this deer mouse. They mark and recapture the animal to roughly estimate population and density of the species in a given area.

Raptors and Upland Game Birds

Teams of two biologists conduct walking surveys for raptors (golden eagles and red-tailed hawks) and upland game birds (sage grouse and chukar). Each team searches for raptors in canyonlands with one biologist walking at the bottom of the canyon and one biologist walking along the canyon edge. For upland game birds, the biologists walk through potential habitat, such as sagebrush stands. The location, species, number, and behavior of raptors and upland game birds are recorded.

This winter, aerial surveys for raptors will be conducted in potential habitat areas.

Cultural and Native American Traditional Uses

Archaeologists consult with the Shoshone-Paiute tribes of the Duck Valley Indian Reservation and review historic documents to help identify resources that have special meaning to Native American peoples. These resources can include cultural, earth, water, biological, and other resources. Consultations are designed to identify and reduce possible impacts to resources that are part of Native American beliefs and traditions.

Field surveys are conducted for archaeological and architectural resources. One or more survey teams inspect the ground by walking approximately 30 meters apart. If evidence of a cultural resource is found, the survey crew defines the boundaries of the resource by walking 2 to 5 meters apart. The locations of artifacts and features are recorded using the Global Positioning System — a satellite-based system for determining the precise location of something on the earth. ■



Survey teams walk 30 meters apart, searching for evidence of cultural resources.



When a potential cultural resource is found, team members record the exact location using the Global Positioning System.

Involvement, continued from page 1

The Withdrawal Process

The basic steps of the land withdrawal process are outlined below.

Step 1: Application

The withdrawal process begins with an application to the Bureau of Land Management.

Enhanced Training in Idaho: On March 29, 1996, the U.S. Air Force filed an application with the Bureau of Land Management's Idaho State Office requesting withdrawal of land for the Enhanced Training in Idaho proposal.

Step 2: Notice of Proposed Withdrawal

When the application is received, a Notice of Proposed Withdrawal and Opportunity for Public Meeting is published in the Federal Register.

Enhanced Training in Idaho: On April 8, 1996, the Bureau of Land Management published the Notice of Proposed Withdrawal and Opportunity for Public Meeting in the Federal Register. Copies of the notice were published in several newspapers in Idaho.

Step 3: Public Comment Period

The Federal Register notice begins a 90-day comment period and the requirement for one or more public meetings. The Bureau of Land Management gathers public comments as a means for helping to define the scope of the issues associated with the proposal.

Enhanced Training in Idaho: The U.S. Air Force, assisted by the Bureau of Land Management, gathered comments about the land withdrawal in a series of eight scoping meetings held in June and July of 1996. Meetings were held in Boise, Bruneau, Mountain Home, Three Creek, and Twin Falls, Idaho; Jordan Valley, Oregon; and Elko, Nevada.

Step 4: Environmental Analysis

Following submission of the initial land withdrawal application, an environmental analysis is conducted. Reports developed for the withdrawal application include:

- evidence of public meetings and public involvement in the environmental review process.
- identification of present land use and the impacts of the proposed use.
- the need for acquiring water rights,
- identification of cultural resources,
- identification of wilderness areas,
- a mineral resource analysis,
- a biological assessment of any listed or proposed endangered or threatened species and their critical habitat,
- a wetlands inventory, and
- the economic impact of the proposed uses of the withdrawn land.

Enhanced Training in Idaho: The Bureau of Land Management requires a thorough investigation of all the public land proposed for withdrawal. In the Enhanced Training in Idaho proposal, the drop area will receive special attention. Most of the individual reports will be included as appendices to the Environmental Impact Statement. Because of the confidential nature of the Cultural Resources Report, only a summary of this report will appear in the Environmental Impact Statement.

Step 5: Management Plan

The Department of Defense prepares a plan that describes how it will use and manage the resources on the proposed withdrawn public land. It is called a Resource Management Plan, but is not to be confused with the land use planning documents of the same name that are common in the Bureau of Land Management.

Enhanced Training in Idaho: A strategy for the Management Plan will be prepared and included with the Environmental Impact Statement. A detailed Management Plan for the proposed withdrawn public land will be prepared if Congress approves the withdrawal.

Step 6: Land Report

The Bureau of Land Management prepares a Land Report summarizing the

issues involved with the proposed withdrawal. This report includes:

- evaluation of the issues.
- a conclusion drawn from the evaluation, and
- a recommended specific course of action.

The Land Report is forwarded to the Bureau of Land Management's Washington, D. C., headquarters office and to the Department of Defense. It is used by the Secretary of the Interior, the Director of the Bureau of Land Management, and their staffs to reach an independent opinion about whether the land should be withdrawn for defense purposes.

Enhanced Training in Idaho: The Land Report will be prepared in conjunction with the Final Environmental Impact Statement and will accompany the withdrawal legislation.

Step 7: Congressional Approval

The Bureau of Land Management, in conjunction with the Department of Defense, finalizes a draft version of the legislation to be submitted to Congress. If it is passed by Congress and signed by the President, the public lands will be withdrawn.

Federal Land Policy and Management Act Timeline

Many of the steps for land withdrawal and the Environmental Impact Statement occur concurrently. For example, public meetings for the land withdrawal and for the environmental impact analysis can be held at the same time. The analysis required to determine environmental impacts for the National Environmental Policy Act can also be used in a similar analysis for the Resource Management Plan.

For More Information

If you would like to review the application for land withdrawal submitted by the U.S. Air Force for the Enhanced Training in Idaho proposal, contact Mr. Jon Foster, (208) 373-3813. ■

ETI Glossary

Airspace — The space above the earth. The Federal Aviation Administration has jurisdiction over all the airspace in the United States. This agency identifies special airspace areas that may be used for military flight activity.

Bureau of Land Management — A U.S. Department of Interior agency with the responsibility of managing public lands.

Drop Area — An area where aircraft drop small, non-explosive, training ordnance on targets.

Electronic Emitter — A radar, either mounted on a truck or stationary inside a fenced area, that simulates an enemy threat (aircraft or weapon).

Electronic Emitter Site — An area developed to park an electronic emitter.

Engle Act — The 1958 congressional act that states that withdrawals of public land of more than 5,000 acres for defense purposes must be approved by Congress.

Enhanced Training in Idaho (ETI) — The Air Force proposal to build a new training range and modify existing airspace so Mountain Home Air Force Base aircrews can train in realistic settings closer to home.

Environmental Impact Statement (EIS) — A federal document, prepared by the responsible federal official, in accordance with the National Environmental Policy Act of 1969 and the President's Council on Environmental Quality regulations. This document describes the environmental impacts of a proposed federal action.

Federal Land Policy and Management Act (FLPMA) — The 1976 congressional act that outlines the land withdrawal process.

Federal Register — A daily federal government publication that announces all proposed and final federal regulations. It also contains notices of public meetings and other events agencies may schedule.

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Land Withdrawal — The withholding of an area of public land from settlement, sale, location, or entry. This process transfers jurisdiction over an area of federal land from one department, bureau or agency to another department, bureau, or agency.

Military Operations Area (MOA) — Areas of airspace designated by the Federal Aviation Administration for special military use. Military Operations Areas were developed to isolate military training areas in a controlled and predictable location. The use of Military Operations Areas is usually scheduled for only a few hours each day. Military Operations Areas are always open to commercial and general aviation traffic on a see-and-avoid basis.

Military Training Route (MTR) — A long, low-altitude corridor that serves as a flight path to a particular destination. The corridor width, length, and height (ceiling and floor) vary from route to route.

National Environmental Policy Act (NEPA) — A U.S. statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment.

No-drop Target — An area of land over which aircrews practice aiming at targets, but do not release training ordnance.

Public Lands — Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

Regions of Influence (ROI) — The three study areas that determine the intensity of analysis for the environmental impact study. Studies in Region of Influence One, the areas in each proposed alternative where ground disturbance would occur, will focus on intense analysis of the 12 resource areas. Studies in Region of Influence Two, the areas in each proposed alternative where aircraft overflight would occur, will focus on limited field work of the 12 resource areas. Studies in Region of Influence Three, the areas in each proposed alternative next to Region of Influence Two, will focus on literature reviews of the 12 resource areas.

Restricted Area — Airspace designated by the Federal Aviation Administration within which the flight of aircraft is subject to restriction. When training is taking place, non-participating aircraft are restricted. Restricted Areas in the United States are generally located above training ranges. ■

Would you like a copy of the Draft Environmental Impact Statement?

The Enhanced Training in Idaho Draft Environmental Impact Statement will be ready for distribution in the spring of 1997. By indicating your preference and mailing this card, you will receive a copy of the Community Report or the entire Draft Environmental Impact Statement. To help you decide, a brief description of each document follows.

- **Community Report** — Written in magazine format, the Community Report tells the story of Enhanced Training in Idaho in less than 100 pages. It describes the environment of southwestern Idaho, the type of training the Air Force is proposing, and the projected environmental impacts.
- **Draft Environmental Impact Statement** — The draft Environmental Impact Statement contains in-depth descriptions of the proposed action and alternatives, quantitative and qualitative analyses, technical descriptions of the environment, and projected environmental impacts of implementing the Enhanced Training in Idaho proposal. The draft Environmental Impact Statement features about 600 pages of text, data tables, graphs, appendices, and literature citations.

Please send me: ☐ Community Report ☐ Draft Environmental Impact Statement

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time.

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In The Next Edition...

... A description of the Enhanced Training in Idaho noise analysis

... A discussion of some of your subjects of interest

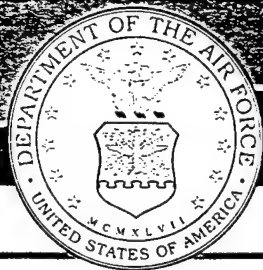
... The third article in the NEPA Process series — The Public Hearing Process

Look for the next edition of the Enhanced Training in Idaho newsletter in April.

U.S. Air Force / Bureau of Land Management

P.O. Box 329

Boise, Idaho 83701-0329



DEPARTMENT OF THE AIR FORCE NEWSLETTER

ENHANCED TRAINING IN IDAHO

What is ETI?

ETI stands for Enhanced Training in Idaho. Enhanced Training in Idaho is a proposal that is designed to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base in Idaho. This newsletter is one of four scheduled to keep you informed about the Enhanced Training in Idaho proposal and the environmental impact analysis process. ■

Want To Know More?

If you have questions or need more information on Enhanced Training in Idaho, please contact:

Captain Melissa Miller
Chief, 366th Wing Public Affairs
366 Gunfighter Avenue, Suite 152
Mountain Home, Idaho 83648-5291
Telephone: 208-828-6800
Fax: 208-828-4205

What's Inside?

Where Are We Now?

The EIS Timeline	2
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The NEPA Process: Draft Environmental Impact Statement Public Comment Period

The public is encouraged to review and comment on the Draft Environmental Impact Statement. Comments can be provided in two ways:

1. By submitting written comments anytime during the public comment period which began on May 9, 1997 and will last until August 6, 1997 (a period of 90 days). Written comments should be sent to the following address:
U.S. Air Force/Bureau of Land Management
P.O. Box 329
Boise, Idaho 83701-0329
2. By attending any one of the seven public meetings sponsored by the Air Force and the Bureau of Land Management. There are several ways to comment at these meetings — oral testimony, computer input or written comments.

The goal for the public comment period and meetings is for the Air Force and Bureau of Land Management to learn if the Draft Environmental Impact Statement adequately addresses environmental issues of concern expressed by individuals, groups and organizations. Comments and questions received during the scoping process focused primarily on the following issues:

- Wildlife resources
- Noise effects
- Native American concerns
- Recreation, aesthetics, wilderness
- Grazing and regional economics

Public comment meetings will be held on:

- June 3, 1997 – Mountain Home High School, Mountain Home, Idaho
- June 4, 1997 – Grand View Elementary School, Grand View, Idaho



- June 5, 1997 – College of Southern Idaho, Twin Falls, Idaho
- June 6, 1997 – Three Creek School, Three Creek, Idaho
- June 9, 1997 – Duck Valley Reservation Headquarters, Owyhee, Nevada
- June 12, 1997 – Boise State University, Boise, Idaho
- June 13, 1997 – Boise State University, Boise, Idaho

Each meeting will begin with an open house at 6:00 PM. A formal public comment session will begin at 6:30 PM.

All public comments will be reviewed and published in the Final Environmental Impact Statement. Responses to those comments relating to the Enhanced Training in Idaho proposal will be included in the Final Environmental Impact Statement.

Public comments have already helped shape the Enhanced Training in Idaho proposal. The Juniper Butte alternative was added as a result of public input during scoping. ■

Areas of Interest

Throughout the Enhanced Training in Idaho Environmental Impact Statement process, the public has been interested in a variety of topics. We have selected three of these areas of interest to discuss in this newsletter. The following articles, *Chaff*, *Noise*, and *Electronic Threat Emitters*, relate the impacts of Enhanced Training in Idaho to the public's concerns.

Chaff

Chaff is used to confuse radar systems that are tracking an aircraft. Chaff is made of thin, silica fibers coated with aluminum. One fiber is about the same size as a human hair and can range in length from 0.3 to 2 inches. The fibers are packaged together in 4-ounce bundles and released from aircraft by a dispenser.

Chaff is released from the aircraft at altitudes ranging from 500 feet above ground level to 50,000 feet mean sea level. These fibers are spread into the atmosphere to form an "electronic false target" to enemy radar. The chaff fibers then slowly fall to the ground.

Chaff is currently used in the Military Operations Area. It poses no known biological or environmental risk to humans or animals.

Under all the Enhanced Training in Idaho alternatives, the use of chaff would increase in the Owyhee and Paradise Military Operations Areas, and decrease on the Saylor Creek Range and its supporting airspace.

The overall use of chaff in the affected

airspace would increase approximately 12 percent. No safety impacts are known to exist with this proposed increase.

In an existing agreement with the Shoshone-Paiute Tribes, the Air Force agreed that chaff will not be used for training operations over the present boundaries of the Duck Valley Indian Reservation. This agreement would remain in place under any of the proposed Enhanced Training in Idaho alternatives.

Electronic Threat Emitters

Electronic threat emitters are radars, that simulate weapon systems, mounted on the beds of pickup trucks or semi-trailers. They would be located at several sites, normally five to eight each day, throughout the training area.

Using mobile electronic threat emitters provides effective Air Force training while maintaining a balance with the environment and traditional land use. Mobile emitters provide realistic scenarios — as in real life, the threat can be moved just as an enemy would move during an actual conflict. The simulated battle takes place electronically between the emitter and the aircraft.

During scoping, the public expressed an interest in safety of the radio frequency energy produced by the threat emitters. Enhanced Training in Idaho would include several safety requirements to protect the public and Air Force personnel from radio frequency energy exposure.

1. Separation distances have been determined to ensure public safety. Depending on the type of emitter in use, personnel safety

separation distances range from 2 to 221 feet from the radar dish.

2. The emitters would be placed on elevated ground. The radar dish, placed at least 8 feet above ground level, is tilted upward to track aircraft, thus the radio frequency energy is directed away from the ground. The emitters are not pointed at the ground or along roadways.
3. Safety measures, including fences, warning signs, rope or chain barriers, and personnel posted as observers, would create a safety zone around the equipment.
4. All electronic emitters are shut down during fueling operations.
5. The emitters would only operate during scheduled training.

Noise

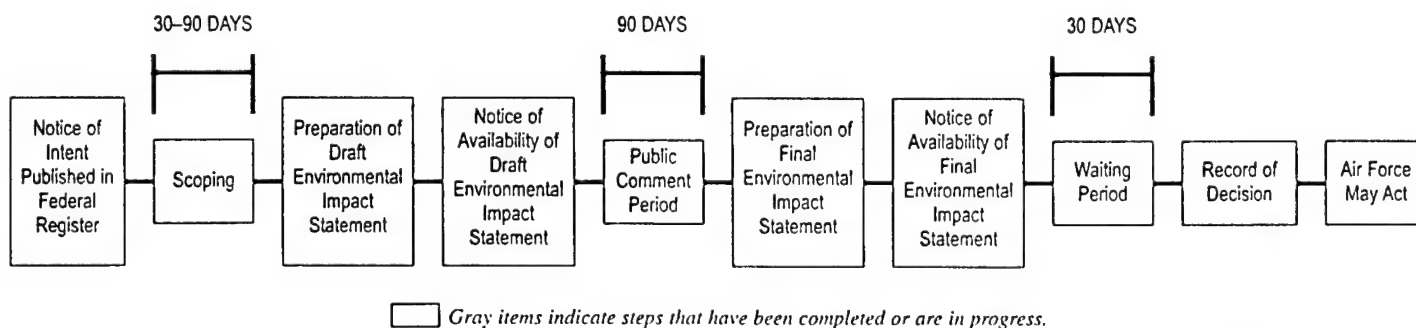
The Enhanced Training in Idaho noise analysis indicates that most noise levels would be reduced.

The noise level reduction would be due to two factors.

1. Aircrews would train at higher altitudes. This means a reduction in noise levels for those people and animals using the land under the airspace.
2. The number of flights over a specific area would be reduced by dispersing the aircraft over a larger area. This would be done by restructuring the airspace boundaries permitting more efficient use, and by adding a small amount of new airspace in the north and to the east of Duck Valley Reservation.

Areas, continued on page 4

Where Are We Now? The EIS Timeline



Draft Environmental Impact Statement Public Review Locations

The Enhanced Training in Idaho Draft Environmental Impact Statement is available for your review. The document has been mailed to many public facilities in Idaho, Nevada, and Oregon. A Community Report summarizing the Draft Environmental Impact Statement is also available. Here are some of those locations:

In Idaho:

American Falls District Library
Arco - Lost Rivers Community Library
Blackfoot - Lucy Doyle Public Library
Boise - Ada County District Library
Boise - Bureau of Land Management, District Office
Boise - Bureau of Land Management, Idaho State Office
Boise - Idaho Governor's Office
Boise - Idaho Legislative Library
Boise - Idaho State Library
Boise Public Library
Boise State University Library
Buhl Public Library
Burley Public Library
Caldwell - Albertson College Library
Caldwell Public Library
Coeur d'Alene Public Library
Eagle Public Library
Emmett Public Library
Fairfield - Camas County Elementary School Library
Filer Public Library
Fort Hall - Shoshone-Bannock Library
Glenns Ferry Public Library
Gooding Public Library
Grand View - East Owyhee County Library
Hailey Public Library
Homedale Public Library
Idaho City - Boise Basin Library District
Idaho Falls Public Library
Jerome Public Library
Ketchum - Community Library Association
Kimberly Public Library
Kuna School Community Library
Marsing - Lizard Butte District Library
McCall Public Library
Meridian District Library
Middleton Public Library
Moscow - University of Idaho Library

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Pocatello Public Library
Post Falls Public Library
Rupert - Demary Memorial Library
Shoshone - Bureau of Land Management District Office
Shoshone District Library
Twin Falls - Bureau of Land Management
Twin Falls - College of Southern Idaho
Twin Falls Public Library
Weiser Public Library

In Nevada:

Carson City - Nevada State Clearinghouse
Elko - Bureau of Land Management, District Office
Owyhee - Duck Valley Reservation
Winnemucca - Bureau of Land Management, District Office
Winnemucca - Humboldt County Library

In Oregon:

Burns - Harney County Library
Jordan Valley City Hall
Ontario - Malheur County Library
Salem - Oregon State Library
Vale Public Library ■

ETI Glossary

Chaff – Chaff are thin, silica fibers coated with aluminum, packaged in 4-ounce bundles and released from aircraft by a dispenser. Chaff is used to form an “electronic false target” to enemy radar.

Electronic Emitter – A radar, either mounted on a truck or stationary inside a fenced area, that simulates enemy surveillance radars, aircraft, guns or missiles.

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Glossary, continued on page 4

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Please send me: ☐ Community Report ☐ Draft Environmental Impact Statement

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time.

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Areas, continued from page 2

The Draft Environmental Impact Statement noise analysis shows that airspace additions will reduce noise levels in most areas throughout the airspace. The only exceptions to this noise reduction would be at the selected alternative site (either Clover Butte, Grasmere, or Juniper Butte) and the proposed northern airspace addition over Jack's Creek.

The proposed additional high altitude airspace southeast of the Duck Valley Reservation is not expected to result in an increase in noise levels. Since a low level Military Training Route already exists through this area, the addition of the higher level Military Operations Area will contribute very little additional noise. ■

Glossary, continued from page 3

Military Training Route (MTR) — A long, low-altitude corridor that serves as a flight path to a particular location. The corridor width, length, and height (ceiling and floor) varies from route to route.

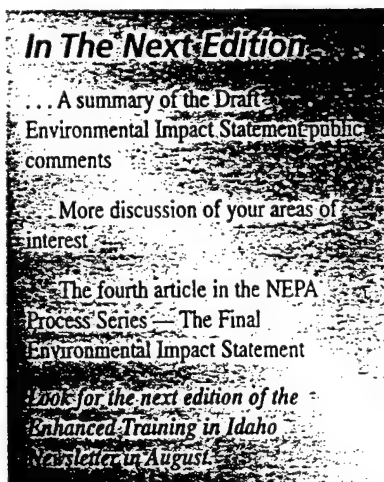
National Environmental Policy Act (NEPA) — A U.S. statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment.

Radio Frequency (RF) Energy — The electromagnetic energy produced by electronic emitters such as radars, radio transmitters, cellular telephones, and microwave ovens. Radio frequency energy is absorbed in the body of animals and humans as heat. ■

U.S. Air Force / Bureau of Land Management

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Please send me: ☐ Community Report ☐ Draft Environmental Impact Statement

Name: _____

Address: _____

Please add any topics you would like to be addressed in future newsletters: _____

Thanks for your time.

Attachment F

**Display Ads and Press Releases
Announcing the Public Hearings**



DEPARTMENT OF THE AIR FORCE

ENHANCED TRAINING IN IDAHO

The United States Air Force, in cooperation with the Bureau of Land Management, requests your participation in the public comment process for the Draft Environmental Impact Statement for the Enhanced Training in Idaho proposal. We encourage your attendance at our public comment meetings. Each meeting will begin with an open house at 6:00 PM and the formal comment session will begin at 6:30 PM. Please mark these dates on your calendars.

<i>City</i>	<i>Date</i>	<i>Location</i>
Mountain Home	Tuesday, June 3, 1997	Mountain Home High School Auxiliary Gym and Foyer
Grand View	Wednesday, June 4, 1997	Grand View Elementary School Gym and Foyer
Twin Falls	Thursday, June 5, 1997	College of Southern Idaho, Shields Building, Rooms 117 and 118 and Room 106 for Displays
Three Creek	Friday, June 6, 1997	Three Creek School House
Duck Valley Reservation	Monday, June 9, 1997	Tribal Headquarters
Boise	Thursday, June 12, 1997	Boise State University, Jordan Ballrooms B and C
Boise	Friday, June 13, 1997	Same as June 12

Comments will be accepted through August 6, 1997. Please send your comments to:
U.S. Air Force/Bureau of Land Management
P.O. Box 329
Boise, Idaho 83701-0329

Here are some places where you can review a copy of the Draft Environmental Impact Statement for Enhanced Training in Idaho.

In Idaho

American Falls District Library
Arco - Lost Rivers Community Library
Blackfoot - Lucy Doyle Public Library
Boise - Ada County District Library
Boise - Bureau of Land Management, District Office
Boise - Bureau of Land Management, Idaho State Office
Boise - Idaho Governor's Office
Boise - Idaho Legislative Library
Boise - Idaho State Library
Boise Public Library
Boise State University Library
Buhl Public Library
Burley Public Library
Caldwell - Albertson College Library
Caldwell Public Library
Coeur d' Alene Public Library
Eagle Public Library
Emmett Public Library
Fairfield - Camas County Elementary School Library
Filer Public Library
Fort Hall - Shoshone-Bannock Library
Glenns Ferry Public Library
Gooding Public Library

Grand View - East Owyhee County Library
Hailey Public Library
Homedale Public Library
Idaho City - Boise Basin Library District
Idaho Falls Public Library
Jerome Public Library
Ketchum - Community Library Association
Kimberly Public Library
Kuna School Community Library
Marsing - Lizard Butte District Library
McCall Public Library
Meridian District Library
Middleton Public Library
Moscow - University of Idaho Library
Mountain Home AFB Library
Mountain Home City Council
Mountain Home Public Library
Murphy - Owyhee County Courthouse
Nampa Public Library
Payette Public Library
Pocatello - Eli M. Oboler Library
Pocatello - Idaho Museum of Natural History
Pocatello Public Library

Post Falls Public Library
Rupert - Demary Memorial Library
Shoshone - Bureau of Land Management District Office
Shoshone District Library
Twin Falls - Bureau of Land Management
Twin Falls - College of Southern Idaho
Twin Falls Public Library
Weiser Public Library

In Nevada

Carson City - Nevada State Clearinghouse
Elko District Office
Owyhee - Duck Valley Reservation
Winnemucca - Bureau of Land Management
Winnemucca - Humboldt County Library

In Oregon

Burns - Harney County Library
Jordan Valley City Hall
Ontario - Malheur County Library
Salem - Oregon State Library
Vale Public Library

For more information, call the 366th Wing Public Affairs Office, 208-828-6800. Also, visit us on the Internet at <http://www.mountainhome.af.mil>

Listed below is the schedule for when the ETI public hearing display ads will appear in regional newspapers.

Publication	Ad to Newspaper	Prints in Newspaper
Mountain Home News	Fedx on Fri 5/16	Wed. 5/21 & 5/28
Glenns Ferry Gazette	Same as above	Tues 5/27 & 6/3
Idaho Statesman	Deliver on Wed 5/28	Sun. 5/25 & 6/8
Times-News	Fedx Tues 5/27	Sun. 6/1 & Wed 6/4
Elko Daily Free Press	Fedx Tues 5/27	Sat 5/31 & Fri 6/6



News Release

United States Air Force

366th Wing Public Affairs, 366 Gunfighter Ave, Ste. #152
Mountain Home Air Force Base, Idaho 83648-5298
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205

Release #97-05-01
May 2, 1997

PUBLIC HEARINGS

MOUNTAIN HOME AIR FORCE BASE, IDAHO – Public hearings concerning the Enhanced Training in Idaho (ETI) range proposal will be held throughout Southern Idaho beginning in June, Air Force and Bureau of Land Management (BLM) officials announced today. At the meetings, representatives of the Air Force and the BLM will be on hand to explain the proposal, the draft environmental impact statement (EIS), and the proposed withdrawal of federal lands. Members of the public are encouraged to comment on the draft EIS in writing or through verbal comments at the meetings.

“Public hearings are designed to solicit public comment on the draft EIS and those comments will help form the final EIS,” said Col Billy Richey, 366th Wing director of staff. “We were very pleased with the comments and participation we received from the public during scoping last year. We took the public comments seriously and developed another alternative based on those comments.”

The draft EIS analyzed the three original alternatives plus the alternative developed out of scoping, Juniper Butte. The draft EIS has been distributed to the public,

including libraries and government offices throughout Idaho and in parts of Nevada and Oregon.

The ETI proposal is designed to enhance the local training opportunities available to the wing, adding much needed flexibility and realism for aircrews. The Air Force developed the proposal after consulting with Idaho Governor Phil Batt, the Idaho Congressional delegation, representatives of the Interior Department, the Shoshone-Paiute tribes and other interested parties.

"The goal of this proposal has been to balance realistic training with the environment and traditional land uses. Public dialogue from scoping helped shape the proposal, and we're hoping the people of Idaho continue to take an active role in the process by expressing their opinions and concerns," said Richey.

The meeting dates and locations are as follows:

June 3 - Mtn. Home High School, Mtn. Home, ID

June 4 - Grandview Elementary School, Grandview, ID

June 5 - College of Southern Idaho, Shilz Bldg, Rms 117 & 118, Twin Falls, ID

June 6 - Three Creek School, Three Creek, ID

June 9 - Duck Valley Reservation Headquarters, Owyhee, NV

June 12 & 13 - Boise State University, Jordan Ballroom, Boise, ID

For more information, call 366th Wing Public Affairs at 828-6800. Written comments on the draft EIS may be sent to U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329. The public comment period closes on 6 August 1997.

--30--

Note: Attached is a listing of the repositories where the Draft Environmental Impact Statement may be read.



News Release

United States Air Force

366th Wing Public Affairs, 366 Gunfighter Ave. Ste. #152
Mountain Home Air Force Base, Idaho 83648-5298
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205

Community Report
Published

Release #97-05-02
May 15, 1997

MOUNTAIN HOME AIR FORCE BASE, Idaho – During the scoping process for the Enhanced Training in Idaho proposal, the Air Force and the Bureau of Land Management heard from many individuals that they would like a summary document that was easier to read and less technical than the full draft environmental impact statement (EIS). The Air Force responded to these requests by preparing the Community Report. This document is a companion report to the draft EIS and is not a legal requirement. The benefit of this kind of summary is that it allows more people to have an understanding of the proposal and participate in the review and public feedback process. This document, along with the draft EIS can be read at public repositories including libraries and government offices throughout Idaho and in parts of Nevada and Oregon.

The meeting dates and locations for the public hearings concerning the Enhanced Training in Idaho (ETI) range proposal are as follows:

June 3 - Mtn. Home High School, Mtn. Home, ID

-more-

June 4 - Grandview Elementary School, Grandview, ID

June 5 - College of Southern Idaho, Shilz Bldg, Rms 117 & 118, Twin Falls,

ID

June 6 - Three Creek School, Three Creek, ID

June 9 - Duck Valley Reservation Headquarters, Owyhee, NV

June 12 & 13 - Boise State University, Jordan Ballroom, Boise, ID

For more information, call 366th Public Affairs at 828-6800. Written comments on the draft EIS may be sent to U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329. The public comment period closes 6 August 1997.

- 30 -

Note: Attached is a listing of the repositories where the Community Report and the Draft Environmental Impact Statement may be read.

Here is a list of places where you can find a copy of the
Enhanced Training in Idaho
Draft Environmental Impact Statement
and Community Report

In Idaho:

American Falls District Library
Arco - Lost Rivers Community Library
Blackfoot - Lucy Doyle Public Library
Boise - Ada County District Library
Boise - Bureau of Land Management District Office
Boise - Bureau of Land Management Idaho State Office
Boise - Idaho Governor's Office
Boise - Idaho Legislative Library
Boise - Idaho State Library
Boise Public Library
Boise State University Library
Buhl Public Library
Burley Public Library
Caldwell - Albertson College Library
Caldwell Public Library
Coeur d'Alene Public Library
Eagle Public Library
Emmett Public Library
Fairfield - Camas County Elementary School Library
Filer Public Library
Fort Hall - Shoshone-Bannock Library
Glenns Ferry Public Library
Gooding Public Library
Grand View - East Owyhee County Library
Hailey Public Library
Homedale Public Library
Idaho City - Boise Basin Library District
Idaho Falls Public Library
Jerome Public Library
Ketchum - Community Library Association
Kimberly Public Library
Kuna School Community Library
Marsing - Lizard Butte District Library
McCall Public Library
Meridian District Library
Middletown Public Library
Moscow - University of Idaho Library
Mountain Home AFB Library
Mountain Home City Council

Mountain Home Public Library
Murphy - Owyhee County Courthouse
Nampa Public Library
Payette Public Library
Pocatello - Eli M. Oboier Library
Pocatello - Idaho Museum of Natural History
Pocatello Public Library
Post Falls Public Library
Rupert - Demary Memorial Library
Shoshone - Bureau of Land Management District Office
Shoshone District Library
Twin Falls - Bureau of Land Management
Twin Falls - College of Southern Idaho
Twin Falls Public Library
Weiser Public Library

In Nevada:

Carson City - Nevada State Clearinghouse
Elko District Office
Owyhee - Duck Valley Reservation
Winnemucca - Bureau of Land Management
Winnemucca - Humboldt County Library

In Oregon:

Burns - Harney County Library
Jordan Valley City Hall
Ontario - Malheur County Library
Salem - Oregon State Library
Vale Public Library

In Virginia:

Headquarters, Air Combat Command at Langley AFB

In Washington, DC

Bureau of Land Management
Headquarters, U.S. Air Force

United States Air Force

366th Wing Public Affairs, 366 Gunfighter Ave, Ste. #152
Mountain Home Air Force Base, Idaho 83648-5298
Phone (208) 828-6800; DSN 728-6800; Fax (208) 828-4205; DSN 728-4205

ETI on the Internet

Release #97-05-03
May 21, 1997

MOUNTAIN HOME AIR FORCE BASE, Idaho -The executive summary for the Enhanced Training in Idaho draft environmental impact statement (DEIS), a list of repositories for the full DEIS, and information about how to comment on the DEIS are now available on the internet. The address for the site containing this information is: <http://arl.gtri.gatech.edu/afx00ahp/afx00ahp.htm> . This site can also be assessed through the Mountain Home Air Force Base home page at <http://www.mountainhome.af.mil> .

"This is a great opportunity for the public to learn more about Enhanced Training in Idaho," said Col Billy Richey, 366th Wing director of staff.

The web site is linked to a number of other sites with emphasis on environmental activities and Air Force operations.

-more-

ETI 2/2/2

The draft EIS and the Community Report can be read at public repositories including libraries and government offices throughout Idaho and in parts of Nevada and Oregon. Written comments on the draft EIS may be sent to U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329. The public comment period closes Aug. 6, 1997.

The meeting dates and locations for the public hearings concerning the Enhanced Training in Idaho range proposal are as follows:

June 3 - Mtn. Home High School, Mtn. Home, ID

June 4 - Grandview Elementary School, Grandview, ID

June 5 - College of Southern Idaho, Shilz Bldg, Rms 117 & 118, Twin Falls, ID

June 6 - Three Creek School, Three Creek, ID

June 9 - Duck Valley Reservation Headquarters, Owyhee, NV

June 12 & 13 - Boise State University, Jordan Ballroom, Boise, ID

All meetings will be held from 6 to 9:30 p.m.

For more information, call 366th Wing public affairs at 828-6800.

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Note: Attached is a listing of the repositories where the Community Report and the Draft Environmental Impact Statement may be read.



News Clips

United States Air Force

366th Wing Public Affairs, 366 Gunfighter Ave, Ste.#152

Mountain Home Air Force Base, Idaho 83648-5291

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The Mountain Home
News, 21 May 97,
Page A-1

Hearing dates announced for ETI proposal

Range hearings open here

The United States Air Force has announced that the first hearing on the new Expanded Training in Idaho range proposal will be held June 3 in Mountain Home.

That hearing on the Draft Environmental Impact Statement for three training range options south of Saylor Creek will kick off a series of seven hearings over the following ten days to solicit public input on the various options being presented to improve training capabilities at Mountain Home AFB.

All the hearings will be held from 6-9:30 p.m.

On June 4, a hearing will be held in Grand View at the Grand View Elementary School. June 5 the show goes on the road to the College of Southern Idaho, Shultz Building, rooms 117 and 118, in Twin Falls, followed on June 6 by a hearing at Three Creek School in the rural ranching area south of Twin Falls.

June 9 the Air Force will take its proposal to the Duck Valley Reservation Headquarters in Owyhee, Nev.

The hearings conclude June 12 and 13 in the Jordan Ballroom at Boise State University.

For those who cannot attend the hearings, written comments may be sent to: U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329.

The public comment period closes Aug. 6.

Copies of the DEIS are available at all local libraries. In addition, a summary document, described as "easier to read and less technical than the full draft environmental impact statement" has been prepared as a result of comments made during the scoping hearings that preceded development of the DEIS.

The "Community Report" is a companion document to the DEIS. "The benefit of this kind of summary is that it allows more people to have an understanding of the proposal and participate in the review and public feedback process," the Air Force said in a prepared statement. It also is available at local libraries.

The new range proposal lists three 12,000-acre sites for development of a dummy ordnance bombing range, and a "no action" alternative. In addition, it makes adjustments to the military airspace over Owyhee County, increasing the flying area by about six percent while trying to move the areas where most of the air combat training will be held away from populated areas.

All of the three proposed sites involve land that was severely burned by fires a decade ago, and is currently used primarily by ranchers and hunters. In addition to the three restricted use target areas, which will surround a much smaller no-access fenced impact area, the Air Force proposes placing a score of radar threat emitters throughout the area. All of the emitters would be located just off existing roads in the area, most taking up no more than one-quarter of an acre.

Besides providing more realistic training for the pilots of the Air Force's only air-intervention composite wing (it's rapid response force), the proposals seek to move combat training operations as much as possible away from populated areas and the Owyhee Canyonlands.

The preferred alternative is known as the Juniper Butte site, located about 25 miles southeast of the Saylor Creek Gunnery Range, which has limited approach areas and was designed for WWII aircraft.

A site near Grasmere, 22 miles southwest of the the Saylor Creek Range, and near Clover Butte, 19 miles south of the range, also are offered as alternatives in the DEIS.

Each of the hearings will feature one room where displays will explain the various proposals being offered, and a room where testimony will be accepted. After the protocol requirements for distinguished speakers, mainly elected officials, the order of speakers will be determined by the sign-up sheets available at each site. At the Boise and Twin Falls hearings, an area also will be set aside for individuals to give testimony directly to a court reporter. Computer stations also will be set up at all hearing sites for individuals who wish to submit their comments by that method.

After the comment period closes, a final environmental impact statement will be developed and released for one more round of public comment, and then a final decision will be made, probably no later than next spring.



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The Times News, 25 May 97, Page A-1, A-2

Hearings focus on impact of Air Force range proposal

By N.S. Nokkervetd
Times-News writer

MOUNTAIN HOME - If Congress approves the latest plan, the Air Force will spend more than \$12 million on proposals for bombing and electronic combat ranges in Owyhee County.

Yet, Air Force officials have testified in federal court that the proposed ranges are an enhancement, not a necessity.

A recently-issued environmental

impact statement on the proposal is the subject of hearings beginning June 3.

The Air Force spent about \$4.5 million on environmental studies of two failed range proposals in 1989 and 1991. And it has spent about \$2.1 million on the current proposal. In addition, the Air Force estimates it will cost about \$5.6 million to

equip the proposed ranges.

The total cost to construct the ranges will not be known until a specific alternative is selected. Public comment is needed before that decision is made, the Air Force says.

Critics of the proposal say the impact statement is inaccurate, superficial and devious. And it doesn't give the public the big picture, said Craig Gehrke, the Wilderness Society's Idaho representative.

Everybody will have a chance to comment on the statement and help shape the final version, Mountain Home Air Force Base spokesman Col. Bill Richey said.

"The Enhanced Training in Idaho proposal and analysis is an in-depth study and a result of more than two years of continuous dialogue between the Air Force and the public," Richey said.

Please see HEARINGS, Page A-1

Want to attend? - A2

Hearings

Continued from A1

But noise analysis in that impact statement is deceptive, said Herb Meyer, a longtime critic of Air Force range proposals in southern Idaho. Meyer is a retired decorated combat pilot and former fighter pilot instructor.

The noise figures, though weighted to reflect the effects of sudden noises in quiet areas, are averaged and don't show the sounds from a 40-plane exercise or the number of sonic booms during such an exercise, Meyer said.

Bureau of Land Management spokesman John Foster agreed that the analysis doesn't reflect what people on the ground will hear. The method used is geared toward urbanized areas to gauge effects on people who live near airports and freeways, he said.

The BLM has been involved with the Air Force in conducting the impact study.

The wing does most of its training at the existing Saylor Creek Bombing Range and in the military airspace over southern Owyhee County, southeastern Oregon and a portion of northern Nevada. The wing includes jet fighters and bombers, long-range bombers and aerial refueling tankers.

For training with live ammo - two to three days a month - and for some large composite force exercises - three to four days a month - the wing trains at ranges in Utah or Nevada.

Using existing facilities, the wing has been pronounced the most combat ready wing in the world.

Air Force officials say it's too

Hearings start June 3

Public hearings on the proposed impact statement for the proposed bombing and electronic combat ranges in Owyhee County will be from 6 to 9:30 p.m.:

- June 3: Mountain Home High School
- June 4: Grandview Elementary School
- June 5: College of Southern Idaho in Twin Falls
- June 6: Three Creek School
- June 9: Duck Valley Tribal Headquarters in Owyhee, Nev.
- June 12: Boise State University's Jordan Ballroom

The hearing format will be a combination of an open public forum and display booths with facilities for taking comment in private. Oral and written testimony will be accepted.

Copies of the impact statement are available in public libraries in most cities, including Burley, Burley, Teton, Gooding, Halley, Jerome, Kimberly and Twin Falls. It also is available in the Cassia County Elementary School Library in Fairfield, the Ketchum Community Library, Denary Memorial Library in Rupert, the Shoshone District Library, the College of Southern Idaho, and at Bureau of Land Management offices in Shoshone and Twin Falls.

Written comments on the impact statement may be sent to: U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise Idaho 83702-0329. The public comment period ends Aug. 6. For information call (208) 828-6800. Information also is available on the Internet: <http://www.mountainhome.af.mil>

Proposal at a glance

- Air Force range proposal at a glance:
- One 12,000-acre bombing range at: Clover Butte, Grasmere or Juniper Butte. Practice bombs dropped within 300-acre target area.
- One 640-acre simulated bombing area - no bombs dropped.
- Four 5-acre simulated bombing areas - no bombs dropped.
- Electronic emitter sites - 10 one-acre sites and 20 quarter-acre sites spread over about 1 million acres - simulate enemy defenses.
- Airspace increases of 555 square miles or 667 square miles in addition to the existing 9,075 square miles of military airspace associated with the range. Airspace extends into northern Nevada and eastern Oregon.

Utah or Nevada. It would be more efficient to train at a range in southern Idaho.

The proposed ranges - one 12,000-acre bombing range, five simulated-bombing areas and 20 electronic-emitter sites spread over about 1 million acres in Owyhee County - would enhance training for the composite wing stationed at the Mountain Home base, the Air Force says.

In addition, planes would fly supersonic maneuvers above

flares and bundles of chaff - aluminumized silica fibers - as evasive maneuvers to avoid simulated enemy air defenses.

Military operations over southern Owyhee County would include: multiple-aircraft exercises from 500 feet to 50,000 feet above the ground; supersonic flight no lower than 10,000 above the ground; and the release of flares and chaff.

The proposals also would increase airspace in the 9,000-

area over southern Owyhee County and parts of Nevada and Oregon by 555 square miles or 667 square miles.

The increase would extend military operations over the Jacks Creek area, a proposed wilderness area the Idaho Department of Fish and Game has said is important to California bighorn sheep and as critical winter range for mule deer, antelope and sage grouse.

Gehrke contends the Air Force should consider the changes in the current proposal along with the earlier establishment of a composite wing unit in a single impact statement.

A federal court ruled in 1995 that the composite wing and an earlier proposed range were connected and cumulative and should be considered in the same impact statement.

The Air Force, however, maintains that the wing and the current range plan are separate issues. "The Air Force contends that the range represents enhancement, not necessity," says a 1995 Air Force memo.

Air Force documents show that a 1991 range proposal, first considered a "single, joint venture" with the composite wing, was later separated to avoid "environmental complications with the range proposal."

Gehrke and other critics contend that only the name has changed. The proposal is the same.

"We've been down this road before," Gehrke said.

Times-News staff writer N.S. Nokkervetd can be reached at 733-

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Comment period extension

Release #97-08-01

August 1, 1997

MOUNTAIN HOME AIR FORCE BASE, Idaho – The United States Air Force, in cooperation with the Bureau of Land Management and the state of Idaho announced today the public comment period for the Enhanced Training in Idaho (ETI) proposal, draft Environmental Impact Statement, (EIS) will be extended until September 8, 1997.

The Air Force extended the comment period in response to several requests including those from the Owyhee County Commission and BLM's Resource Advisory Council, said Colonel Bill Richey, 366th Wing director of staff.

"Public participation has helped shape this proposal, and any comments will be considered in preparation of the final EIS," said Richey.

-more-

Extension 2/2/2

The draft EIS and the Community Report can be read at public repositories including libraries and government offices throughout Idaho and in parts of Nevada and Oregon. Written comments on the draft EIS may be sent to U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329.

The public comment period will close September 8, 1997.

- 30-

Note: Attached is a listing of the repositories where the Community Report and the Draft Environmental Impact Statement may be read.

Here is a list of places where you can find a copy of the
Enhanced Training in Idaho
Draft Environmental Impact Statement

In Idaho:

American Falls District Library
Arco - Lost Rivers Community Library
Blackfoot - Lucy Doyle Public Library
Boise - Ada County District Library
Boise - Bureau of Land Management, District Office
Boise - Bureau of Land Management, Idaho State Office
Boise - Idaho Governor's Office
Boise - Idaho Legislative Library
Boise - Idaho State Library
Boise Public Library
Boise State University Library
Buhl Public Library
Burley Public Library
Caldwell - Albertson College Library
Caldwell Public Library
Coeur d' Alene Public Library
Eagle Public Library
Emmett Public Library
Fairfield - Camas County Elementary School Library
Filer Public Library
Fort Hall - Shoshone-Bannock Library
Glenns Ferry Public Library
Gooding Public Library
Grand View - East Owyhee County Library
Hailey Public Library
Homedale Public Library
Idaho City - Boise Basin Library District
Idaho Falls Public Library
Jerome Public Library
Ketchum - Community Library Association
Kimberly Public Library
Kuna School Community Library
Marsing - Lizard Butte District Library
McCall Public Library
Meridian District Library

Middleton Public Library
Moscow - University of Idaho Library
Mountain Home AFB Library
Mountain Home City Council
Mountain Home Public Library
Murphy - Owyhee County Courthouse
Nampa Public Library
Payette Public Library
Pocatello - Eli M. Oboler Library
Pocatello - Idaho Museum of Natural History
Pocatello Public Library
Post Falls Public Library
Rupert - Demary Memorial Library
Shoshone - Bureau of Land Management District Office
Shoshone District Library
Twin Falls - Bureau of Land Management
Twin Falls - College of Southern Idaho
Twin Falls Public Library
Weiser Public Library

In Nevada:

Carson City - Nevada State Clearinghouse
Elko District Office
Owyhee - Duck Valley Reservation
Winnemucca - Bureau of Land Management
Winnemucca - Humbolt County Library

In Oregon:

Burns - Harney County Library
Jordan Valley City Hall
Ontario - Malheur County Library
Salem - Oregon State Library
Vale Public Library

In Virginia:

Headquarters, Air Combat Command at Langley AFB

In Washington, DC

Bureau of Land Management
Headquarters, U.S. Air Force

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The Idaho Statesman, Boise, 2 Aug 97, Page 8b

Training range views

People still have time to express their opinions about the proposed expansion of the Mountain Home Air Force Training Range. The U.S. Air Force, the Bureau of Land Management and the state of Idaho announced that the public comment period for the Enhanced Training in Idaho proposal-draft environmental impact statement will be extended until Sept. 8. The draft statement and the community report can be read at many public agencies, including libraries and government offices throughout Idaho and in parts of Nevada and Oregon. Written comments may be sent to the U.S. Air Force/Bureau of Land Management, P.O. Box 329, Boise, ID 83702-0329.

APPENDIX C
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ATTACHMENTS

Attachment A: Terms

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFI	Air Force Instruction
AST	Above Ground Storage Tank
BEE	Bioenvironmental Engineering
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
DAR	Defense Access Road
EBS	Environmental Baseline Survey
IRP	Installation Restoration Program
PCB	Polychlorinated Biphenyl
pCi/l	picocuries per liter
POL	petroleum, oils, and lubricants
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WWTP	Wastewater Treatment Plant

ENVIRONMENTAL BASELINE SURVEY REPORT

(PHASE I)

The United States Air Force Air Combat Command (ACC) is proposing a new training range in southern Idaho to augment existing Saylor Creek Range (SCR) and the surrounding airspace. The proposed project, referred to as, Enhanced Training in Idaho (ETI), would provide high-quality, realistic training for aircraft based at Mountain Home Air Force Base (AFB). The proposed alternatives for enhanced training include development of one of three proposed 12,000 acre tactical training ranges, five no-drop targets, and 30 emitters (ten one-acre and twenty one-quarter-acre sites) located throughout southwestern Idaho in the eastern half of Owyhee County. In accordance with the provisions of the Engle Act of 1958, the development of the proposed ETI range requires lands utilized for military purposes be withdrawn from public use. This contamination study is being prepared as required by the Engle Act.

Air Force Instructions (AFIs) 32-9001, 32-9003, 32-9004, and 32-7066, state that whenever the Air Force acquires, transfers, leases, or sells property, an Environmental Baseline Survey (EBS) must be completed prior to the transaction. The EBS process applies to all real property within the United States, its territories, and its possessions, based on the requirements conveyed under the provisions of AFI.

The primary purpose for conducting an EBS is to document the environmental condition of a property prior to acquiring or transferring interest, limiting Air Force environmental liability associated with that property. The information presented in this document provides a framework to ensure that federal, state, local and Air Force requirements are met when conducting environmental surveys and provides supplemental information to assist in implementing AFI 32-7066, Environmental Baseline Surveys in Real Estate Transactions.

This document presents the necessity of environmental baseline surveys, when the surveys were conducted, how the surveys were conducted, and what information was gathered as a result of survey efforts. Conclusions and recommendations are made as a result of these efforts and are discussed.

1.0 PURPOSE OF THE ENVIRONMENTAL BASELINE SURVEY

The purpose of an EBS is to determine if property considered for acquisition is contaminated or has the potential for environmental contamination. An EBS documents the nature, magnitude, and extent of any environmental contamination, establishes due diligence, and assesses the health and safety risks related to the property transaction. An EBS studies the environmental conditions of the property of interest obtained through a record search, site inspection, interviews, and sampling (if necessary). If contamination is identified, the EBS further defines any potential liabilities and

determines the effects on property valuation. Additionally, the EBS serves as the basis for notice of environmental condition when required under Section 120[h][1] of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended (42 U.S.C. 9620[h][1]) or any applicable state or local real property disclosure requirements.

1.1 BOUNDARIES OF THE PROPERTY AND SURVEY AREA

Mountain Home AFB is located in Elmore County in southern Idaho on the western end of the Snake River Plain, 10 miles west of the city of Mountain Home, and approximately 50 miles southeast of Boise (Figure C-1). Saylor Creek Range (SCR) occupies approximately 110,000 acres located southeast of the base (Figure C-2).

The boundaries for the properties under examination for this report include both federal (Bureau of Land Management [BLM]-managed) and State of Idaho lands for the three alternatives for a proposed 12,000-acre tactical training range, six no-drop target sites (ND-8 was surveyed in a previous EBS), nine of the one-acre emitter sites (BK was surveyed previously), and 18 of the one-quarter-acre emitter sites (AU and AV were previously surveyed). The majority of lands within the proposed tactical range, target areas, and emitter sites consist of public lands administered by the BLM and the State of Idaho. Table C-1 describes the proposed training range component acreages associated with ETI.

Table C-1. Acreages of Proposed Range Development Alternatives

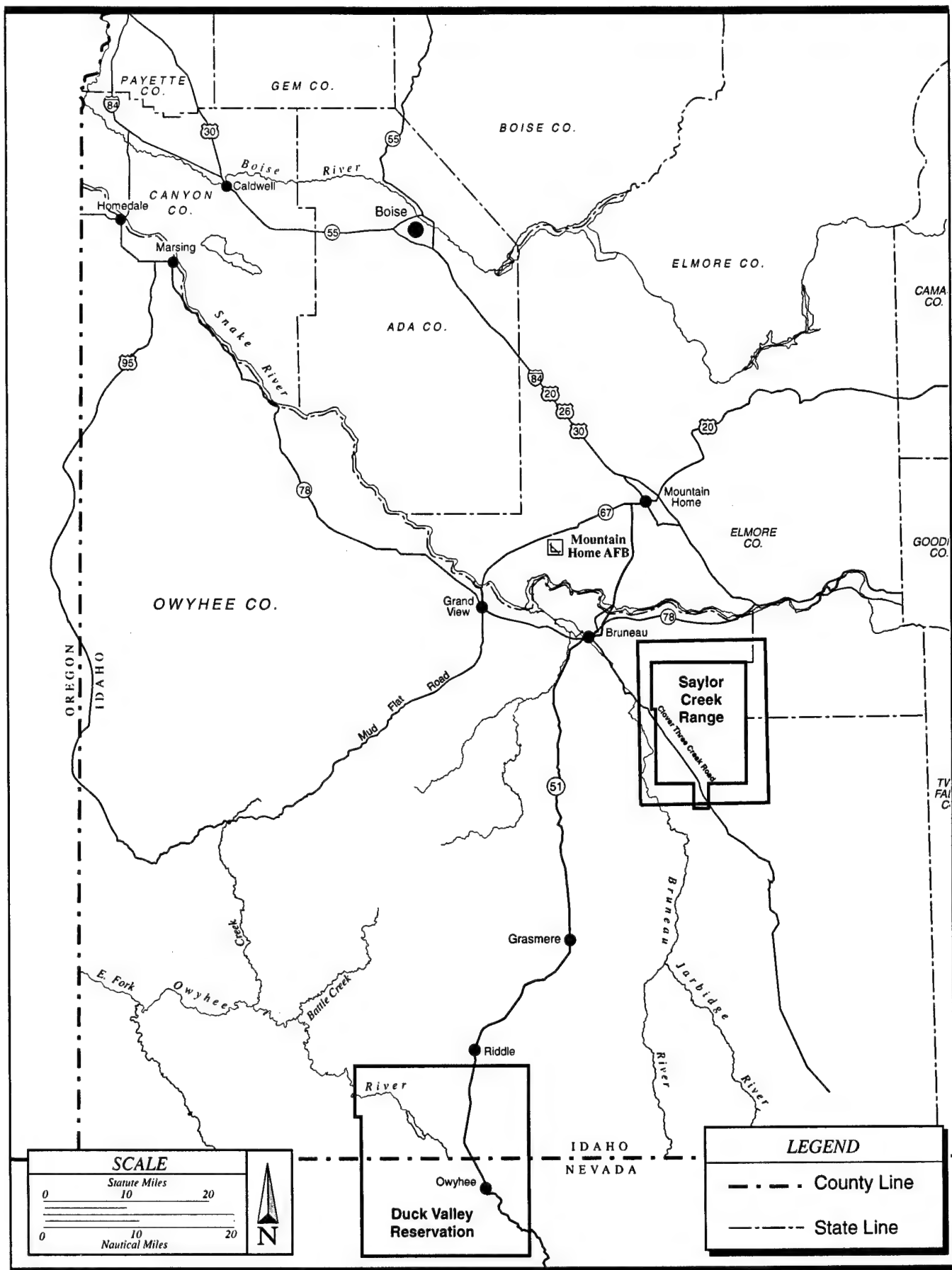
Alternative	BLM Public Lands Withdrawal	BLM Public Lands Right of Way	State of Idaho	Total
Alternative B - Clover Butte	11,864	4.50	646.50	12,515
Alternative C - Grasmere	9,264	4.50	2,406.50	11,675
Alternative D - Juniper Butte	11,269	4.50	961.50	12,235

2.0 SURVEY METHODOLOGY

A variety of survey methods were utilized for data collection. A comprehensive records search was conducted through technical documents provided by the 366th Wing, BLM, and the State of Idaho. Persons familiar with the historical and current uses of the parcels of interest and local area and technical representatives of various agencies were consulted, sites were surveyed and photographs taken. In addition, an EBS conducted in 1995 (Dews 1995) for locating temporary mobile emitters, was consulted for four of the proposed sites.



Figure C-1 Regional Location of Mountain Home AFB



2.1 APPROACH AND RATIONALE

2.1.1 Description of Documents Reviewed

The following records, technical documents, real estate documents, and maps were reviewed to determine the potential for past and present site contamination.

Mountain Home Air Force Base

Opportunity Assessment Report for Mountain Home Air Force Base, Mountain Home, Idaho, June 1994. Reviewed results of a baseline waste generation survey for Mountain Home AFB, representing the results of the opportunity assessment.

Hazardous Waste Management Plan 3208-96, Mountain Home Air Force Base, Mountain Home, Idaho, August 1996. Reviewed hazardous waste management logs, generation documents, and accumulation requirements.

Hazardous Waste Management Plan, Mountain Home Air Force Base, Mountain Home, Idaho, Draft Report, July 1994. Reviewed hazardous waste management logs, generation documents, and accumulation requirements.

HAZMAT Emergency Planning and Response Plan, Mountain Home Air Force Base, Mountain Home, Idaho, July 1995. Reviewed plans providing emergency response guidelines for hazardous material spills.

Hazardous Waste Minimization Review and Plan Mountain Home Air Force Base, Mountain Home, Idaho, October 1993. Reviewed research of plans and procedures that have been put into place to reduce hazardous waste and minimize impacts on the environment.

Area of Concern Assessments for Precision Bombing Ranges, Small Arms Range, and Areas of Concern 6 and 11, Mountain Home Air Force Base, Idaho, July 1996. Reviewed report including results of an area of concern (AOC) assessment conducted in 1995.

Management Action Plan. 1996. Mountain Home Air Force Base, Mountain Home, Idaho.

Miscellaneous Documentation

Environmental Data Resources, Inc. EDR-Radius Map and Geocheck Report. Search of available environmental records.

U.S. Geological Survey Topographical Map. Reviewed topography of parcels and surrounding properties.

U.S.D.A. Farm Services Aerial Photographs. Reviewed aerial photographs of parcels and surrounding properties.

Soil Survey of Owyhee County, Idaho. 1987. Identified soil types and land forms on proposed parcel.

2.1.2 Property Inspections

An on-site inspection of the properties (three 12,000-acre proposed training range alternative sites, six no-drop targets, nine one-acre emitter and 18 one-quarter-acre emitter sites) was conducted during the week of 19-23 August 1996. The parcels were located and traversed to identify unnatural surface features, stained soils, stressed vegetation or exposed soil, stormwater drainage patterns onto and off of the property, signs of human activity, and any unusual odors that could indicate potential contamination. Existing uses and conditions of the parcels were recorded and adjacent land areas were examined. Figure C-3 details the characteristics of the project components. One no-drop target (ND-8), one one-acre emitter site (BK), and two one-quarter-acre emitter sites (AU and AV) were surveyed in 1995 for a previous EBS. Since these sites have not been used, conditions have not changed, so use of the 1995 EBS results are still valid.

2.1.3 Personal Interviews

The following people were interviewed to obtain information on the proposed parcels, local vicinity, technical and regulatory requirements, and real estate history:

Jim Huntley, County Clerk, Murphy Courthouse: Discussed Simplot and Tindall properties and how to search records.

Chuck Coch, Deputy County Clerk, Murphy Courthouse: Interviewed to discuss procedures for a records search at the courthouse. Reviewed computer tracking system.

Owyhee County assessor.

Ernie Bahem, Appraiser, Murphy Courthouse: Interviewed to discuss BLM ownership issues in the proposed area for ETI. Discussed the significance of the Taylor Grazing Act.

Jon Mabbutt, Owyhee Title Company, Murphy: Confirmed that no property for withdrawal is privately owned and that any other private ownership that may exist in the area is not adjacent to the property of interest.

Lt. Dwight Junio, Civil Engineer, 366 CES/CEVC, Mountain Home AFB, Idaho: Interviewed to ascertain hazardous materials operating procedures, Saylor Creek Range operations in comparison to what is proposed for ETI and to obtain copies of the Hazardous Materials Plan for Mountain Home AFB and the operating procedures and guidelines for exercises on the range.

Gary L. Burton, R.E.M., Chief of Environmental Flight, Mountain Home AFB, Idaho: Interviewed to discuss hazardous materials usage during training and discussed who

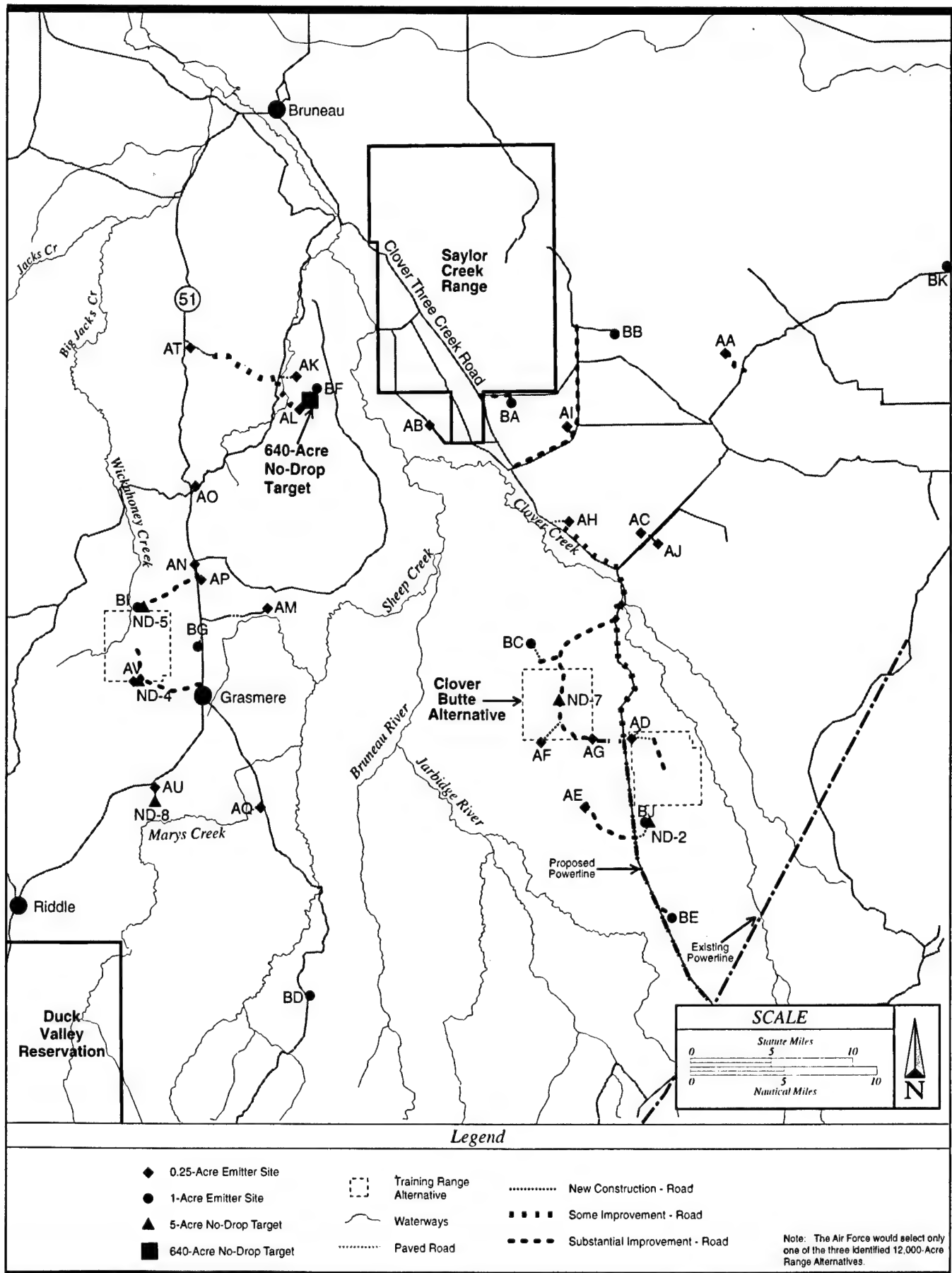


Figure C-3 Project Components

the best contact would be to provide associated literature and documentation concerning hazardous materials.

Paul Seronko, Environmental Protection Specialist, BLM. Interviewed to discuss hazardous materials management plans on BLM managed lands and real estate history.

Mail Surveys

The majority of the adjacent landowners do not have regular phone service and it was not possible to speak with them in person. In order to obtain information from these individuals a mail survey was conducted. The questionnaire consisted of sixteen questions addressing past landuse of specific properties. Included in the mailing was a cover letter explaining the need for collecting information, the questionnaire and a map, which can be found in Attachment C. The following people were contacted:

Adjacent landowners

William I. Tindall

Simplot

Other landowners

Strickland YT Ranches	J. Strickland
Simplot Livestock	Chuck Jones
Riddle Ranches Inc.	Pete Jackson, Jr.
Wells Livestock	Walter Wells
Devils Creek Ranch Inc.	
J&J Ranches	
Swan Land & Livestock Corporation	
Eric Davis	
John Urquidi	
Jay Black	
George Mitchell	
Frank Bachman	

Dave Tindall

Chet Brackett

Bert Brackett

2.1.4 Sampling

In reference to the scope of work, no environmental sampling was conducted during this EBS.

3.0 FINDINGS FOR SUBJECT PROPERTY

3.1 HISTORY AND CURRENT USE

The Mountain Home AFB was established by the U.S. Department of Defense in 1943 as a training base for several bombardment groups during World War II. The Base was deactivated in the fall of 1945, reactivated as a Strategic Air Command (SAC) Base in 1948, and then deactivated in 1950. The Base was assigned to the Military Air Transport Service (MATS) in 1951, and served as a training base for Aerial Resupply and Communication (ARC) wings through 1953. The Base was under SAC jurisdiction until 1965 when the Tactical Air Command assumed control. Three Titan I Missile complexes were supported by Mountain Home AFB from 1960 to 1965. The 366th Tactical Fighter Wing has been assigned to Mountain Home AFB since 1972.

Historically, the range used by the Air Force encompassed over 400,000 acres, which included Saylor Creek Range. In the 1960s over 300,000 acres was returned to the BLM, leaving the Air Force with the 110,00 acre Saylor Creek Range. The entire 174 square miles of the Saylor Creek Range has been withdrawn by the U.S. Air Force. Outside the 12,200-acre exclusive use area, the remaining withdrawn lands comprise a multiple use area where sheep and cattle grazing are permitted and managed by the BLM. A public county road with no access restrictions crosses part of the range area and leads to other areas of southern Idaho. The predominant land use in the area consists of military activities, grazing and some recreational use directly associated with the Bruneau and Jarbidge rivers, and the Bruneau Dunes State Park.

Hazardous materials and wastes have been used and generated at Mountain Home AFB for aircraft maintenance and other industrial operations. Other wastes include sanitary sewage and refuse. Prior to 1969, these wastes were disposed of by incineration, dumping at the Lagoon Landfill (Site LF-1) or the B-Street Landfill (Site LF-2), discharge to the sanitary sewer, road oiling, and/or collection by a contractor for disposal off site. Since 1969, all wastes have been collected by a contractor for off-site disposal or sent to the Defense Reutilization and Marketing Office (DRMO) for final disposal.

Currently, lands proposed for withdrawal are managed by the BLM and the State of Idaho. The BLM follows the principles of multiple use and sustained yield by balancing resource enhancement and protection. BLM public lands are divided into districts, and then further subdivided into resource areas (RAs) to facilitate direct on-the-ground management and customer service activities. Special Recreation Management Areas (SRMAs) are often designated in areas of high visitor use, special resource values, and particular recreation opportunities. Two RAs, the Jarbidge and Bruneau, are potentially affected by the proposed training range, no-drop targets, and emitter sites (Figure C-4).

The Bruneau Resource Area encompasses 2,055,155 acres of BLM-administered public land. The majority of this area consists of flat to rolling terrain covered with grass and sagebrush and affords extensive livestock grazing in this area. The Jacks Creek SRMA found in the Bruneau RA, includes two major canyon systems and an intervening basaltic dome. A variety of outdoor recreation opportunities exist, for example, hunting, fishing, hiking, camping, rock collecting, and boating.

The Jarbidge Resource Area includes 1,690,473 acres of BLM-administered public land. The area consists of flat to rolling plateaus covered with grass and sagebrush, providing extensive livestock grazing in this region. Also found within this RA is the Bruneau-Jarbidge Rivers SRMA, dominated by deep canyons that divide both grass and sagebrush plateaus. Within this area, the Snake River is a major recreational attraction. Hunting, fishing, boating, and motor vehicle use are the primary recreational activities.

3.2 ENVIRONMENTAL SETTING

The proposed 12,000-acre training range area, no-drop targets, and emitter sites are located in Owyhee County. The topography of this region is generally flat to rolling and within the Snake River Plain geologic and physiographic province. In general, the soils underlying the area, range from shallow to very deep and in numerous cases are limited by a hardpan layer. A significant amount of the soils are well-drained, with poorly drained soils found in swale bottoms and depression areas. Runoff is predominantly slow to medium in rate. The hazard associated with water erosion is low to moderate, with no single area characterized as high. The slopes listed for this area range from 0% to 35%, with most in the 0% to 10% range. Wind erosion hazard is low to moderate, with the exception of an emitter site and an area found in Juniper Butte that have high ratings. In reviewing soil parameters, the shrink-swell potential of the soils varies most significantly.

Owyhee County is characterized by a semiarid climate. The major surface waters in Owyhee County consist of rivers and large creeks that drain north and west into the Snake River. These water courses encompass a portion of the Snake River Plains section containing the Owyhee, Snake, Bruneau, and Jarbidge rivers. Many of the rivers and creeks have been impounded to create small reservoirs used for irrigation,

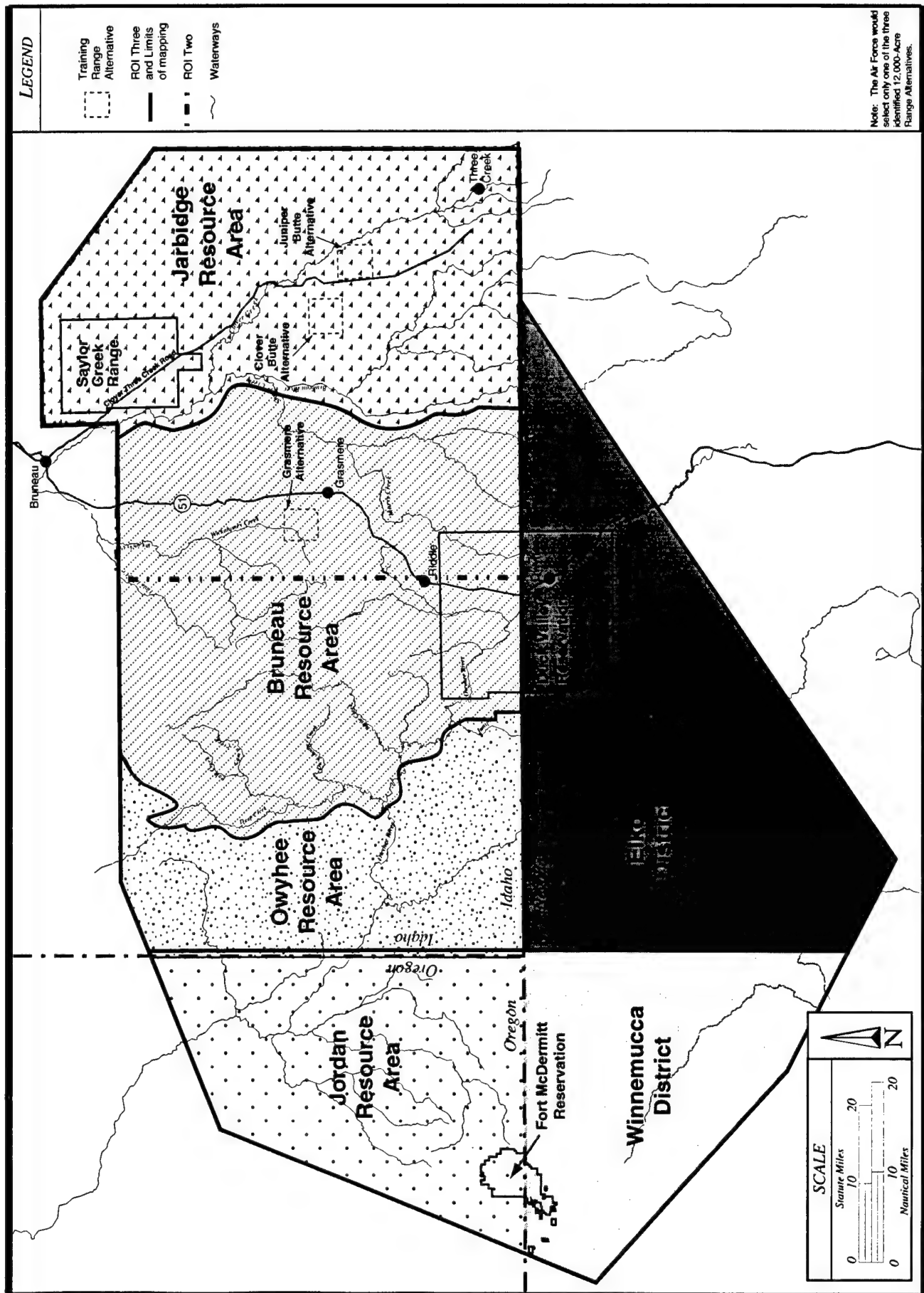


Figure C-4 Bureau of Land Management Districts and Resource Areas in ROI Three

recreation, power, and domestic and municipal water supplies. Surface waters are not present on any of the parcels proposed for acquisition (refer to Figure C-3).

There are three basic hydrologic basins within Owyhee County, which drain northward into the Snake River (Owyhee County 1980). The Bruneau River system covers the eastern half of the county and includes many tributary streams which are perennial near their headwaters and intermittent in lower valleys. The Owyhee River drainage extends along the south side of the Owyhee Mountains, the Owyhee Range, and the entire southwestern plateau portion of the county. This water flows in and out of eastern Oregon before eventually draining into the Snake River north of Owyhee County. The Snake River basin consists of several small, intermittent streams that feed directly into the Snake River along the northeastern front of the Owyhee Mountains.

The central portion of the Bruneau River Basin contains a high upland surface drained by numerous small washes. The surface drainage empties into the deeply incised canyons of the major perennial watercourses through short, steep-sided canyons. The major watercourses of this central area are from east to west, the East Fork of the Bruneau River, the Jarbidge River, the Bruneau River, and Sheep Creek.

The Owyhee River basin drains an area characterized by higher elevations and greater topographical relief with more precipitation than other areas of Owyhee County. The higher precipitation is mainly in the form of snowfall on the Owyhee Mountains. Similar to the Bruneau River basin, snowmelt and rainfall are drained through incised canyons of the major perennial watercourses. These watercourses include Blue Creek, Battle Creek, Deep Creek, the Owyhee River, the South Fork of the Owyhee River, and the Little Owyhee River.

Groundwater movement is generally northward toward the Snake River. Thermal groundwater occurs over a large area south of the Snake River in Owyhee and Twin Falls counties. Recharge to aquifers in foothills, uplands, and mountains of Owyhee County is primarily from infiltration of precipitation. Recharge to aquifers in the lowlands may be from interaquifer flow; infiltration from rivers, intermittent streams, irrigation canals, drainage ditches, reservoirs, applied irrigation water, precipitation, and septic-tank drainage fields; and leakage from perched-water tables. The amount of recharge is affected primarily by geologic structure, mineral composition, primary porosity, and rock textures of the geologic units comprising the aquifers (Parlman 1983).

Streams throughout Owyhee County are subject to occasional and temporary flooding. These floods are caused by snowmelt in the surrounding mountains, high-intensity thunderstorms, or a combination of the two. While these floods increase stream-bank erosion and downstream sediment load, they do not pose a significant hazard.

The proposed project component area lies within the Columbia Plateau physiographic province (Fenneman 1931). The Columbia Plateau is an elevated plateau with mountains that are dissected by canyons draining to the Pacific Ocean via the Columbia River. Based on regional landform, the area lies within a vegetation classification known as the Intermountain Sagebrush Province/Sagebrush Steppe Ecosystem (Bailey and Kuchler 1966). The major vegetation types occurring within the region of influence are sagebrush shrub-steppe (most prevalent), shadscale, western juniper woodland, riparian, wetland (including playas), native grasslands (including lowland, valley, and canyon grasslands), mountain mahogany chaparral, forest (aspen and conifers in the mountains), and burned or seeded areas. In general, vegetative cover consists of different mixes of big sagebrush, shadscale, forbs with cheatgrass, Sandberg bluegrass, and bottlebrush squirreltail.

3.3 HAZARDOUS SUBSTANCES

3.3.1 Hazardous Materials and Petroleum Products

No hazardous substances or petroleum products, either located or stored, were identified on any of the parcels at the time of the site visits. Records and interviews indicated that no such materials have been stored in the past.

3.3.2 Hazardous and Petroleum Waste

Storage, use, accumulation, or release of hazardous or petroleum waste is not known to have occurred on any of the parcels. In addition, no evidence of these activities was noted during the site inspection.

3.4 INSTALLATION RESTORATION PROGRAM CONTAMINATION

Mountain Home AFB has 35 sites in the Installation Restoration Program (IRP). Of these sites, two have been closed and 29 are designated as no further action sites by Air Force, Environmental Protection Agency (EPA), and Idaho Department of Health and Welfare (IDHW) Record of Decision 20 October 1995. Two other sites have been completed with recommendations for no further action, and one site has been withdrawn from the Federal Facility Agreement and placed under the RCRA permit.

3.5 STORAGE TANKS

3.5.1 Aboveground Storage Tanks

During the site inspections, no indications of aboveground storage tanks (ASTs) were found. There were no pumps, pipes, vents, concrete pads, or bare surface areas that indicated the presence of an AST.

3.5.2 Underground Storage Tanks

Indication of underground storage tanks (USTs) were not found during the site inspections. No pumps, pipes, vents, concrete pads, or surface depressions that could indicate the presence of unknown USTs were identified.

Review of the Idaho Emergency Response files indicate that there are no records of any reported spills within two miles of any property proposed for acquisition.

3.5.3 Pipelines, Hydrant Fueling, and Transfer Systems

As a result of on-site inspections of the parcels, no indications of pipelines, hydrant fueling operations, or transfer systems for liquids were found. In addition, no pumps, pipes, vents, concrete pads, or surface depressions that could indicate the presence of liquid fuel systems were identified.

There is a buried, 2-inch PVC water line that crosses the region from south to north, originating in Nevada. The Joe Bob water system pipeline is owned by the BLM, and provides water for grazing. The pipeline is buried approximately one to four feet below the surface and is gravity fed.

3.6 OIL/WATER SEPARATORS

There were no oil/water separators or any known to exist on the subject parcels.

3.7 PESTICIDES

There were no signs on any of the parcels of excessive pesticide application.

3.8 MEDICAL BIOHAZARDOUS WASTE

No use of medical or biohazardous material or generation of any such waste is known to have occurred on the parcels.

3.9 ORDNANCE

No use or storage of ordnance is known to have occurred on the majority of the parcels.

Historical indices from the BLM indicate that on 7 October 1943, the federal government ordered that four areas be withdrawn for use of the War Department as precision bombing ranges. The precision bombing ranges are located south, southeast, and southwest of Mountain Home AFB (Figure C-5). Each site is a parcel of land approximately 4 square miles in area. No detailed information related to the historical use of the Precision Bombing Ranges (PBRs) are available. It is known that during the mid-1940s, bomb scoring activities and evaluations were conducted at the site.

Activities at this site are believed to have been similar to activities at the Saylor Creek Gunnery Range, where precision bombing training was conducted and expended

ordnance was disposed in various burial trenches (IDHW 1990). The presence of a thin-cased metal fragment suggests that explosive material may have been expended and later buried at these sites. One no-drop target (640 acres) and one one-acre emitter site would be established in portions of PBR 3. A part of the eastern boundary of proposed Alternative C (Grasmere) would also lie within portions of PBR 4.

3.10 RADIOACTIVE WASTES

No storage, use, or release of any radioactive waste is known to have occurred on the parcel.

3.11 SOLID WASTE

There was no solid waste found on any of the parcels at the time of the site visits. After examination of the sites it does not appear that any landfills existed. No surface anomalies indicating solid waste mounds were observed.

3.12 GROUND WATER

Ground water is stored in and moves through volcanic formations, with the exception of some areas where sedimentary rocks overlie the volcanic rocks and form a distinct ground-water system. Ground water flows northward through the volcanic rock aquifer to the sedimentary rock aquifer, from areas of recharge along the Jarbidge and Owyhee Mountains into the Bruneau Valley area, where it is discharged as spring flow or leaves the area as underflow.

Ground-water quality data for the proposed range area is limited to information available from the U.S. Geological Survey (USGS). Preliminary ground-water quality data collected in Owyhee County indicate that the majority of ground water appears to be both potable and generally acceptable for most uses.

Due to the location of the properties proposed for acquisition, ground water is free to move under the influence of gravity. Ground water migrates from the zone of saturation near the higher elevations in to the lower trough areas. The conditions for ground-water flow exist at least intermittently during precipitation events.

3.13 WASTEWATER TREATMENT, COLLECTION, AND DISCHARGE

There is no wastewater treatment, collection or discharge located or known to be located on the parcels at this time.

3.14 DRINKING WATER QUALITY

The quality of ground water is affected by many factors, including the composition of aquifer materials, water temperature, and source of recharge. Preliminary

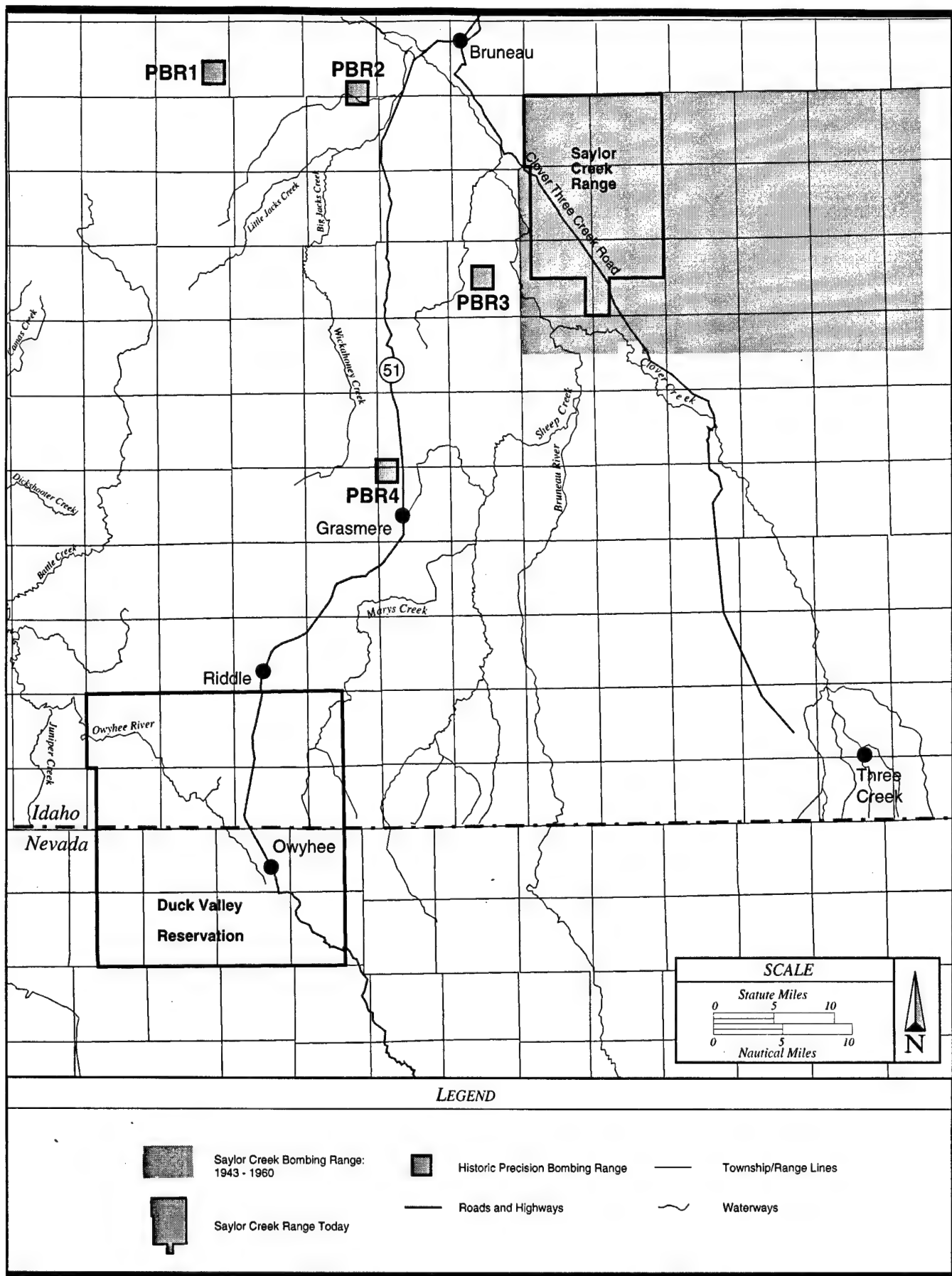


Figure C-5 Precision Bombing Ranges and Saylor Creek Range

ground-water quality data collected in Owyhee County indicate that the majority of ground water appears to be potable and generally acceptable for most uses. Of 1,165 monitoring sites sampled from 1991 through 1993, 121 (ten percent) exceed established standards. Health concerns with natural ground-water chemistry in the Bruneau River Basin are associated with arsenic, fluoride, and possible sulfate.

3.15 ASBESTOS

There are no structures of a permanent nature located on the parcels. During the site visits, no debris was observed that could potentially contain asbestos.

3.16 POLYCHLORINATED BIPHENYLS (PCBs)

No transformers or oil circuit breakers which could contain polychlorinated biphenyls (PCBs) were found on the parcels. Overhead powerlines do not exist in the immediate areas and there has not been any known storage of electrical equipment on the parcels.

3.17 RADON

In 1995- 1996, the Idaho Health Department sampled 42 homes in Owyhee County for radon. Results from this study revealed an average radon concentration of 4.0 picocuries per liter (pCi/l). Maximum and minimum concentrations were found to be, 0.3 and 22.1, respectively. There has been no known sampling for radon on the subject parcels at the present time.

3.18 LEAD-BASED PAINT

There are no permanent structures located on the parcels. No debris were found that could potentially contain lead-based paint.

4.0 FINDINGS FOR ADJACENT PROPERTIES

4.1 LAND USES

The owners of property directly adjacent to property that is proposed for acquisition, identified by Owyhee County records, are the State of Idaho, William I. Tindall, and Simplot. The land use for the properties adjacent to the subject parcels consists primarily of grazing and undeveloped parcels.

Envirosafe Services of Idaho, Inc. (ESII) is in the process of closing a facility located 18 miles south of Bruneau, Idaho and two miles east of Highway 51 on Missile Base Road, approximately two miles from the nearest proposed project component (Figure C-6). ESII purchased the site in 1981 from Wes-Con, Inc. The ESII property at Site A consists of 82 acres of land that contains a 30-acre, former United States Air Force Titan ICBM base. The 30-acre portion of the ESII property is the location of Site A of the ESII

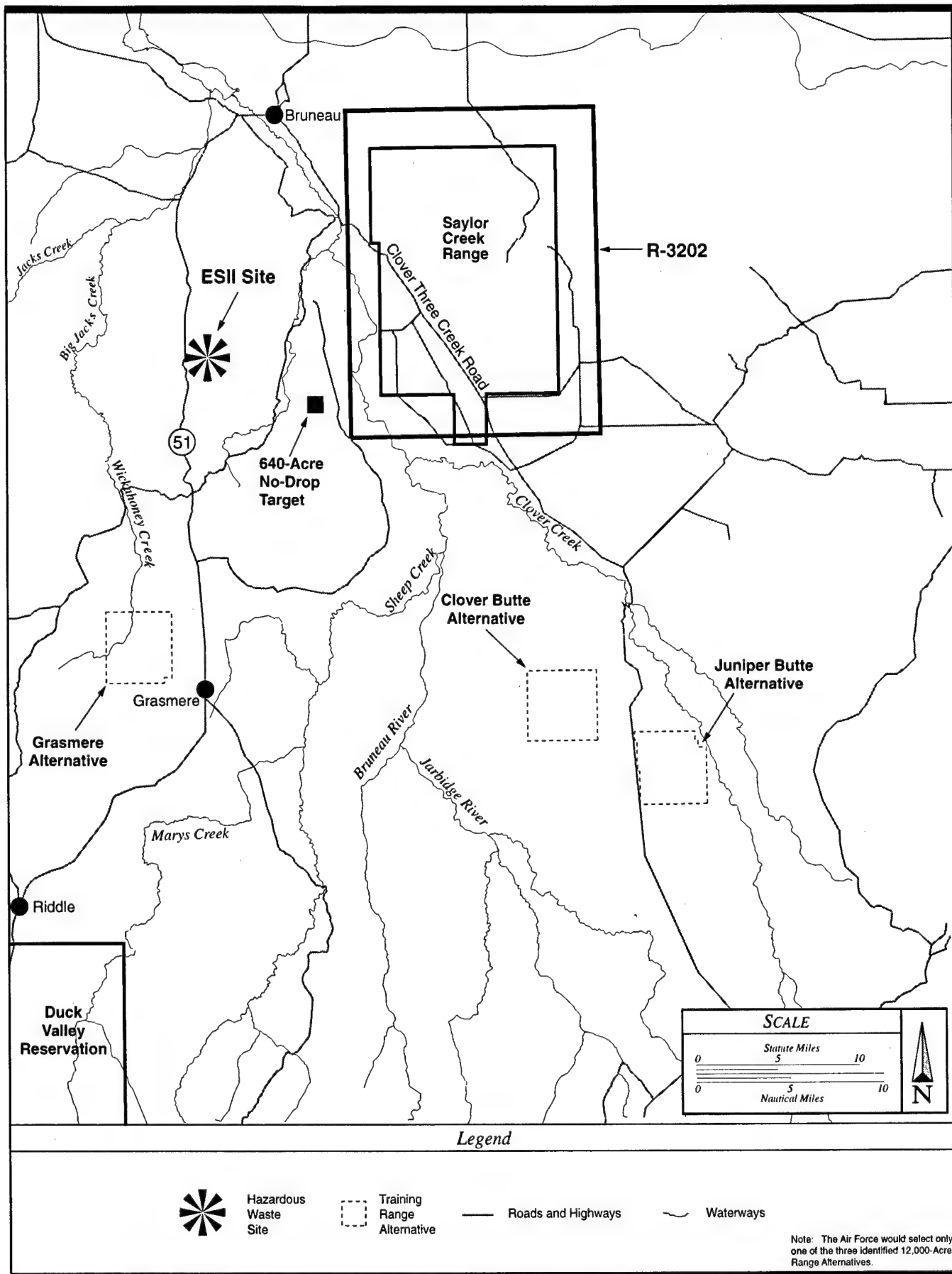


Figure C-6 Hazardous Waste Sites

Bruneau Facility. From 1973 to 1981, Site A was owned and operated by Wes-Con, Inc., as a hazardous waste disposal facility. In January 1983, commercial waste activities were stopped, and no waste has been received at the facility since then. In November 1985, ESII submitted a closure plan for the facility to the U.S. Environmental Protection Agency. Since that time, additional facility characterization work has been conducted by ESII in accordance with EPA and Idaho Division of Environmental Quality (DEQ) approved work plans.

4.2 SURVEYED PROPERTIES

USGS topographic maps and pertinent coordinates supplied by the Mountain Home AFB were used to survey the properties. Aerial photographs were also obtained. In addition, site photographs were taken. These materials are available for review at the Air Force Repository for the ETI EIS.

5.0 APPLICABLE REGULATORY COMPLIANCE ISSUES

5.1 LIST OF COMPLIANCE ISSUES

Compliance issues would include violations or potential violations of federal, state, or local laws and regulations that have occurred on the parcel proposed for acquisition. There are no compliance issues applicable to the parcel and thus, no corrective actions are required.

5.2 DESCRIPTION OF CORRECTIVE ACTIONS

There are no corrective actions on the subject parcel at this time. Corrective actions off-site would include the continued investigation and remedial action at the Mountain Home AFB sites that pose a threat to human health and safety. In addition, the ESII site located south of Bruneau is in accordance with effective closure activities to be implemented. ESII plans to complete corrective action, close the facility, and implement the post-closure permit.

5.3 ESTIMATES OF VARIOUS ALTERNATIVES

The proposed alternatives for enhanced training include development of one of three proposed 12,000-acre training ranges, five no-drop targets, and 30 emitters located throughout southwestern Idaho in the eastern half of Owyhee County. The various alternatives and component estimations for ETI are presented in detail and can be found in the EIS Chapter 2.

6.0 CONCLUSIONS

The field observations and research detailed in this EBS provide reasonable grounds to believe that acquisition of management responsibility for the proposed lands would not pose undue risks or costs associated with environmental and hazardous material/waste

issues. Reviewing the history of the parcels in questions does not present issues which would make the acquisition unreasonable.

The entire 174 square miles of the SCR have already been withdrawn by the U.S. Air Force. Outside the 12,200-acre exclusive use area, the remaining withdrawn lands comprise a multiple use area where sheep and cattle grazing is permitted and managed by the BLM. The predominant land use in the area consists of military activities, grazing and some recreational use directly associated with the Bruneau and Jarbidge rivers, and the Bruneau Dunes State Park. The land use for the properties adjacent to the subject parcels consists primarily of grazing.

6.1 FACILITY MATRIX

Figure C-7 shows areas and buildings located at Mountain Home AFB where hazardous wastes are generated and accumulated, accumulation point; areas where hazardous wastes can be temporarily stored for up to 90 days, accumulation site; and the permitted storage facility.

An accumulation point is an area where waste is initially accumulated under control of the shop supervisor. Forty accumulation points for hazardous waste exist at Mountain Home AFB.

A hazardous waste accumulation site is an area near the waste generating activity where hazardous waste is accumulated in containers or tanks for periods of up to 90 days. The two accumulation sites for hazardous waste at Mountain Home AFB are the Central Collection Facility (Building 1297) and the Base Hospital Collection Facility (Building 6000).

A permitted storage facility is a facility that has been granted a RCRA Part B permit by the IDHW DEQ. DRMO operates the hazardous waste storage facility in Building 1322.

7.0 RECOMMENDATIONS

The findings of this EBS indicate minimal risk for environmental contamination. The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for these conclusions. It is, therefore, recommended that Mountain Home AFB pursue the acquisition of management responsibilities for the subject parcels to support the future mission and development of Mountain Home AFB. This EBS supports the decision of the Air Force to pursue the withdrawal of approximately 12,000 acres of public lands currently managed by the BLM.

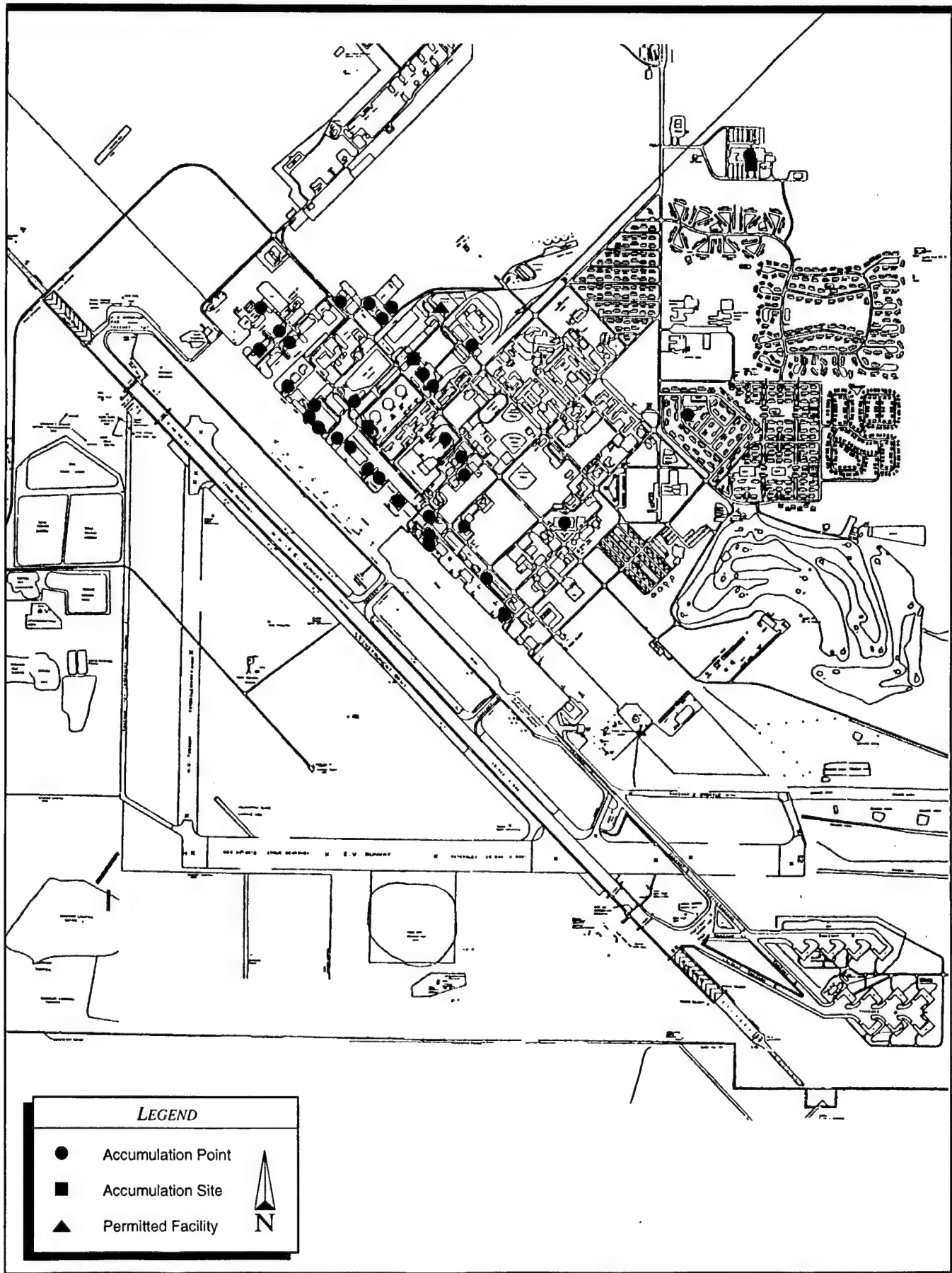
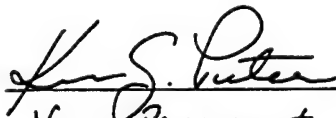


Figure C-7 Mountain Home AFB Accumulation Points, Accumulation Site, and Permitted Facility

8.0 CERTIFICATIONS

Certification of the Environmental Baseline Survey

Ogden Environmental and Energy Services has conducted this Environmental Baseline Survey on behalf of the Air Force. Ogden Environmental and Energy Services has reviewed all appropriate records made available, and conducted visual site inspections of the selected sites associated with the proposed Enhanced Training in Idaho following an analysis of information obtained during the record search. The information contained within the survey report is based on records made available and, to the best of Ogden Environmental and Energy Service's knowledge, is correct and current as of 13 March 1997.

Certified by: 
VICE-PRESIDENT

Date: 3/13/97

ATTACHMENT A

TERMS

ATTACHMENT A

CONTAMINATION STUDY GLOSSARY

A

abandoned well — a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes

aboveground storage — a tank or other container, the bottom of which is on a plane not more than 6 inches below the surrounding surface

agency — the Environmental Protection Agency (EPA)

aquifer — an underground bed or layer of earth, gravel, or porous stone that contains water

asbestos — the asbestiform varieties of: chrysotile (serpentine); corcidolite (riebeckite); amosite (cummingtonitegrunerite); anthophyllite; tremolite; and actinolite.

B

biomonitoring — the use of living organisms to test water quality at a discharge site or downstream

BMPs — Best Management Practices

byproduct — a chemical substance produced without a separate commercial intent during the manufacture, processing, use or disposal of another chemical substance or mixture

C

CERCLA — Comprehensive Environment Response, Compensation and Liability Act of 1980

CFR — Code of Federal Regulations

chemical waste — the waste generated by chemical, petro chemical, plastic, pharmaceutical, biochemical, or microbiological manufacturing processes

compliance — compliance with clean air or water standards, also compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the EPA, or an air or water pollution control agency, in accordance with the requirements of the Air or Water Act and regulations issued pursuant thereto

confined aquifer — an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself, an aquifer containing confined groundwater

contaminate — introduction of a substance that would cause a) the concentration of that substance in the groundwater to exceed the maximum contaminate level or b) an increase in the concentration of that substance in the groundwater where the existing concentration of that substance exceeds the maximum contaminate level

D

discharge — 1) includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping, but excludes a) discharges in compliance with a permit under section 402 of the Federal Water Pollution Control Act, b) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and c) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems. 2) a) a discharge into any waters beyond the contiguous zone from any vessel or onshore or offshore facility, which vessel or facility is subject to or is engaged in activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, and b) any discharge into any waters beyond the contiguous zone which contain, cover, or support any natural resource belonging to, appertaining to, or under the exclusive management authority of the United States, 3) when used without qualifications includes a discharge of a pollutant, and a discharge of pollutants

discharge of pollutant — 1) a) any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or b) any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation 2) this definition includes additions of pollutants into waters of the United States from : surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other conveyances leading into privately owned treatment works, this term does not include an addition of pollutants by any "indirect discharge"

disposal — 1) the planned release or placement of waste in a manner that precludes recovery, 2) the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters

dumping — a disposition of material: provided that it does not mean a disposition of any effluent from any outfall structure to the extent that such disposition is regulated under the provisions of the Federal Water Pollution Control Act, as amended, under the provisions of, or under the provisions of the Atomic Energy Act of 1954, as amended, nor does it mean a routine discharge of effluent incidental to the propulsion of, or operation of motor-driven equipment on, vessels: provided further, that it does not mean the construction of any fixed structure or artificial island nor the intentional placement of any device in ocean waters or on or in the submerged land beneath such waters, for purpose

E

effluent — waste material discharged into the environment, treated or untreated, generally refers to water pollution

environment — 1) water, air, land, and all plants and man and other animals living therein, and the interrelationships which exist among these, 2) a) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Fishery Conservation and Management Act of 1976, and b) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States

environmental assessments — 1) means a concise public document for which a Federal agency is responsible that serves to, a) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact, b) aid an agency's compliance with the Act when no environmental impact statement is necessary, c) facilitate preparation of a statement when one is necessary, 2) shall include brief discussions of the need for the proposal, of alternatives as required by NEPA, of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted

environmental impact assessment (EIA) — the report, prepared by the applicant for an NPDES permit to discharge as a new source, which identifies and analyzes the environmental impacts of the applicant's proposed source and feasible alternatives

Environmental Protection Agency (EPA) — an independent agency of the Federal government formed in 1970 and responsible for pollution abatement and control

programs, including programs in air and water pollution control, water supply and radiation protection, solid and toxic waste management, pesticides control, and noise abatement

EPA region – the states and territories found in the following regions:

Region I – Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island

Region II – New York, New Jersey, Commonwealth of Puerto Rico, and the U.S. Virgin Islands

Region III – Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and the District of Columbia

Region IV – Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina, and Florida

Region V – Minnesota, Wisconsin, Illinois, Michigan, Indiana, and Ohio

Region VI – New Mexico, Oklahoma, Arkansas, Louisiana, and Texas

Region VII – Nebraska, Kansas, Missouri, and Colorado

Region VIII – Montana, Wyoming, North Dakota, South Dakota, Utah, and Colorado

Region IX – California, Nevada, Arizona, Hawaii, Guam, American Samoa, Commonwealth of the Northern Mariana Islands

Region X – Washington, Oregon, Idaho, and Alaska

F

facility – 1) an identifiable piece of process equipment, a source is composed of one or more pollutant emitting facilities, 2) a) any building, structure, installation, equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or b) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel, 3) any HWM facility, UIC underground injection well, NPDES point source, PSD stationary source, or any other facility or activity that is subject to regulation under the RCRA, UIC, NPDES, or PSD programs

Federal Agency – 1) any department, agency, or other instrumentality of the federal government, and any independent agency or establishment or establishment of the

federal government including any government corporation and the Government Printing Office, 2) all agencies of the Federal Government, it does not mean the Congress, the Judiciary, or the President, including the performance of staff functions for the President in his Executive Office, it also includes, for purposes of these regulations, States and units of general local government and Indian tribes assuming NEPA responsibilities under the Housing and Community Development Act of 1974

Federal facility — any building, installation, structure, land, or public work owned by or leased to the Federal Government

filtration — the physical removal of the solid constituents from aqueous waste streams by means of a filter medium, most aqueous waste streams that contain solids are treated by this process

floodplain — lowland and relatively flat areas adjoining inland and coastal waters and other flood prone areas such as offshore islands, including at a minimum that area subject to a 1% or greater chance of flooding in any given year, the base floodplain shall be used to designate the 100-year floodplain

formation — a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface

friable asbestos material — any material that contains more than 1% asbestos by weight and that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure

fuel — 1) any material which is capable of releasing energy or power by combustion or other chemical or physical reaction, 2) a) gasoline and diesel fuel for gasoline or diesel-powered automobiles or b) electrical energy for electrically powered automobiles

G

general permit — an NPDES "permit" issued under authorizing a category of discharges under the CWA within a geographical area

groundwater — 1) the supply of fresh water under the earth's surface that forms a natural reservoir, 2) water below the land surface in the zone of saturation, 3) water in a saturated zone or stratum beneath the surface of land or water

groundwater contamination — the pollution of springs and wells from their sources underground, it can result from indiscriminate land disposal of potentially hazardous waste materials that are then dissolved or suspended in free liquids, usually water, and leach downward through the unsaturated profile to the zone of saturation or from improperly constructed or operated wells, movement of the toxic materials in the

saturated zone is horizontal, and the rate of flow is determined by the gradient of the aquifer and its permeability, correction of the problem is seldom limited to one site

H

hazard — a probability that a given pesticide will have an adverse effect on man or the environment in a given situation, the relative likelihood of danger or ill effect being dependent on a number of interrelated factors present at any given time

hazardous substance — A) any substance designated pursuant to the Federal Water Pollution Control Act, B) any element, compound, mixture, solution, or substance designated pursuant to the Act, C) any hazardous waste having the characteristics identified under or listed pursuant to the Solid Waste Disposal Act, D) any toxic pollutant listed under of the Federal Water Pollution Control Act, E) any hazardous air pollutant listed under the Clean Air Act, F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to the Toxic Substances Control Act, the term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas useable for fuel

hazardous waste — any waste or combination of wastes which pose a substantial present or potential hazard to human health or living organisms because such wastes are nondegradable or persistent in nature or because they can be biologically magnified, or because they can be lethal, or because they may otherwise cause or tend to cause detrimental cumulative effects; also, a waste or combination of wastes of a solid, liquid, contained gaseous, or semisolid form which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness, taking into account the toxicity of such waste, its persistence and degradability in nature, its potential for accumulation or concentration in tissue, and other factors that may otherwise cause or contribute to adverse acute or chronic effects on the health of persons or other organisms

hazardous waste discharge — the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous waste into or on any land or water

herbicide — a chemical that controls or destroys undesirable plants

I

individual generation site — the contiguous site at or on which one or more hazardous wastes are generated, an individual generation site, such as a large manufacturing plant,

may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous

industrial waste — any solid, semisolid, or liquid waste generated by a manufacturing or processing plant the ocean dumping of which may unreasonable degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, and economic potentialities

infectious waste — 1) equipment, instruments, utensils, and formites of a disposable nature from the rooms of patients who are suspected to have or have been diagnosed as having a communicable disease and must, therefore, be isolated as required by public health agencies; 2) laboratory wastes, such as pathological specimens and disposable formites attendant thereto; 3) surgical operating room pathologic specimens and disposable formites attendant thereto, and similar disposable materials from outpatient areas and emergency rooms

infiltration — water other than wastewater that enters a sewer system from the ground through such means as defective pipes, pipe joints, connections, or manholes, infiltration does not include, and is distinguished from inflow

injection well — a well into which fluids are being injected

insecticides — all substances or mixtures of substances intended for preventing or inhibiting the establishment, reproduction, development, or growth of, destroying or repelling any member of the Class Insecta or other allied Classes in the Phylum Arthropoda declared to be pests

J

jigging — a process for separating presized solid materials of different densities by using the periodic pulsation of a liquid through a bed of the mixed material to float the lighter solids

joule — a unit of energy or work which is equivalent to one watt per second or 0.737 foot-pounds

K

kg — kilogram(s)

kkg — 1000 kilogram(s)

km — kilometer(s)

L

land disposal — placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, concrete vault or bunker intended for disposal purposes and placement in or on the land by means of open detonation, the term land disposal does not encompass ocean disposal

landfill — a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well

landfill cell — a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes, examples of landfill cells are trenches and pits

leachate — any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste

leaching — the process by which nutrient chemicals or contaminants are dissolved and carried away by water, or are moved into a lower layer of soil

LUST — leaking underground storage tank

M

manifest — the form used for identifying the quantity, composition, and the origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage

maximum contaminant level — 1) the maximum permissible level of a contaminant in water is delivered to the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system, contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition, 2) the maximum permissible level of a contaminant in water which is delivered to any user of a public water system

MCL — maximum contaminant level

medically contaminated waste — discarded materials that contain or have come into contact with objects or substances used in patient diagnosis, care, or treatment

monitoring well — a well used to obtain water samples for water quality analysis or to measure groundwater levels

N

National Pollutant Discharge Elimination System (NPDES) — the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Clean Water Act, the term includes an approved program

natural resources — land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any state or local government, or any foreign government

navigable waters — includes all navigable waters of the United States including the territorial seas, and includes but is not limited to: 1) all waters which are presently used, or were used in the past, or may be susceptible to use as a means to transport interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tied, and including adjacent wetlands; the term wetlands as used in this regulation shall include those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, wetlands generally include swamps, marshes, bogs and similar areas; the term adjacent means bordering, contiguous or neighboring; 2) tributaries of navigable waters of the United States, including adjacent wetlands; 3) interstate waters, including wetlands; and 4) all other waters of the United States such as intrastate lakes, rivers, streams, mudflats, sandflats, and wetlands, the use, degradation or destruction of which affect interstate commerce including, but not limited to: (i) intrastate lakes, rivers, streams, and wetlands which are utilized by interstate travelers for recreational or other purposes; and (ii) intrastate lakes, rivers, streams, and wetlands from which fish or shellfish are or could be taken and sold in interstate commerce; and (iii) intrastate lakes, rivers, streams and wetlands which are utilized for industrial purposes by industries in interstate commerce

NPDES — National Pollutant Discharge Elimination System

NPDES application — the uniform national forms (including the NPDES application short forms, NPDES application standard forms, and any subsets)

NPDES permit — any permit or equivalent document or requirements issued by the Administrator, or, where appropriate, by the Director, after enactment of the Federal Water Pollution Control Amendments of 1972, to regulate the discharge of pollutants pursuant to section 402 of the Act

NPDES reporting form — the uniform national forms for reporting data and information pursuant to the Federal Water Pollution Control Act

O

oil — oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil

oil spill — accidental discharge into bodies of water, can be controlled by chemical dispersion, combustion, mechanical containment, and absorption

open dump — any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of RCRA and which is not a facility for disposal of hazardous waste

P

parts per million (ppm) — a volume unit of measurement; the number of parts of a given pollutant in a million parts of air

PCB — (polychlorinated biphenyl) — 1) any of several organic compounds used in plastics manufacture, transformers, and capacitors that are toxic and persistent environmental pollutants and tend to accumulate in animal tissues, further sale or new use of the compounds was barred in 1979 by TSCA, 2) any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance

PCB article — any manufactured article, other than a PCB container that contains PCBs and whose surface has been in direct contact with PCBs, PCB article includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item, 1) which is formed to a specific shape or design during manufacture, 2) which has end use functions dependent in whole or in part upon its shape or design during end use, and 3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB article

PCB contaminated electrical equipment — any electrical equipment, including but not limited to transformers, capacitors, circuit breakers, reclosers, voltage regulators, switches, electromagnets, and cable, that contain 50 ppm or greater PCB, but less than 500 ppm PCB, oilfilled electrical equipment other than circuit breakers, reclosers, and cable whose PCB concentration is unknown must be assumed to be PCB contaminated electrical equipment

PCB equipment — manufactured item, other than a PCB container or a PCB article container, which contains a PCB article or other PCB equipment, and includes microwave ovens, electronic equipment, and fluorescent light ballast and fixtures

PCB transformer — any transformer that contains 500 ppm PCB or greater

permeability — the capacity of a porous medium to conduct or transmit fluids

pesticide — any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and 2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant: provided, that the term pesticide shall not include any article (1)(a) that is a new animal drug within the meaning of section 201 (w) of the Federal Food, Drug, and Cosmetic Act, or (b) that has been determined by the Secretary of Health, Education, and Welfare not to be a new animal drug by a regulation establishing conditions of use for the article, or (2) that is an animal feed within the meaning of section 201 (x) of such Act bearing or containing an article covered by clause (1) of this provision

pesticide chemical — as defined in section 201 (q) of FIFRA, means any substance which, alone, in chemical combination, or in formulation with one or more other substances, is an economic poison within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act and which is used in the production, storage, or transportation of raw agricultural commodities

pesticide-related wastes — all pesticide-containing wastes or by-products which are produced in the manufacturing or processing of a pesticide and which are to be discarded, but which, pursuant to acceptable pesticide manufacturing or processing operations, are not ordinarily a part of or contained within an industrial waste stream discharged into a sewer or the waters of a state

point source — (1) a stationary location where pollutants are discharged, usually from an industry; under the FWPCA, a point source is discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft, from which pollutants are or may be discharged, this term does not include return flows from irrigated agriculture, (2) for particulate matter, sulfur oxides, carbon monoxide, hydrocarbons, and nitrogen dioxide, (a) any stationary source the actual emissions of which are in excess of 90.7 metric tons per year of the pollutant in a region containing an area whose 1970 urban place population, as defined by the U.S. Bureau of Census, was equal to or greater than 1 million; (b) any stationary source the actual emissions of which are in excess of 22.7 metric tons per year of the pollutant in a region containing an area whose 1970 urban place population, as defined by the U.S. Bureau of the Census was less than 1 million; or (c) without regard to amount of emissions stationary sources such as those listed in Appendix C to this part, (3) for lead,

any stationary source the actual emissions of which are in excess of 4.54 metric tons per year or lead compounds measured as elemental lead

pollutant — dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water, it does not mean: (a) sewage from vessels within the meaning of the Clean Water Act; or (b) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well was used either to facilitate production or for disposal purposes is approved by authority of the state in which the well is located, and if the state determines that such injection or disposal will not result in the degradation of ground or surface water resources, radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear produced isotopes

pollution — the presence of matter or energy whose nature, location or quantity produces undesired environmental effects; for purposes of the Federal Water Pollution Control Act, pollution is the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water

porosity — the ratio of the volume of pores of a material to the volume of its mass

portable tank — a closed container having a liquid capacity more than 60 U.S. gallons, and not intended for fixed installation

POTW — publicly owned treatment works

ppb — abbreviation for parts per billion

ppm — abbreviation for parts per million by volume

Q

quality assurance program plan — a formal document which describes an orderly assembly of management policies, objective, principles, organizational responsibilities, and procedures by which an agency or laboratory specifies how it intends to: (a) produce data of documented quality, and (b) provide for the preparation of quality assurance project plans and standard operation procedures

quality assurance project plan — an organization's written procedures which delineate how it produces quality data for a specific project or measurement method

R

recharge — process by which water is added to the zone of saturation, as recharge of an aquifer

regional administrator — (1) one of the ten Regional Administrators of the U.S. Environmental Protection Agency, (2) the Administrator of any Regional Office of EPA or any officer or employee thereof to whom his authority is duly delegated, where the Regional Administrator has authorized the Regional Judicial Officer to act, the term Regional Administrator; shall include the Regional Judicial Officer, in a case where the complainant is the Assistant Administrator for Enforcement or his delegate, the term Regional Administrator as used in these shall mean the Administrator

release — any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, but excludes (A) any release which results in exposure to persons solely within a workspace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such a release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act, or, for the purposes of section 104 of this title or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 102 (a)(1) or 302 (a) of the Uranium Mill Tailings Radiation Control Act of 1978, and (D) the normal application of fertilizer

reportable quantities — quantities that may be harmful as set forth, the discharge of which is a violation of section 311 (b)(3) of the FWPCA and requires notice as set forth in 40 CFR

reporting agency — the applicable State agency or, in metropolitan areas, a local air pollution control agency designated by the State to carry out the provisions of 40 CFR

representative sample — (1) any sample of the waste, which is equivalent to the total waste in composition, and physical and chemical properties, (2) a sample of a universe or whole which can be expected to exhibit the average properties of the universe or whole

rodenticide — a chemical or agent used to destroy rats or other rodent pests, or to prevent them from damaging food, crops, etc.

runoff — (1) that portion of precipitation that flows over the ground surface and returns to streams, it can collect pollutants from air and carry them to the receiving waters, (2) any rainwater, leachate, or other liquid that drains over land from any part of a facility

S

sedimentation — letting solids settle out of waste water by gravity during waste water treatment

sludge — any solid, semisolid or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant

soil — all unconsolidated materials normally found on or near the surface of the earth including, but not limited to, silts, clays, sands, gravel, and small rocks

sole source aquifer — an aquifer that is the sole source of drinking water for an area, upon designation by the Administrator of EPA, development around a sole source aquifer that could contaminate the drinking water can be curtailed

solid waste — any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended

SPCC — spill prevention control and countermeasure [plan]

spill — (1) any unplanned discharge or release of hazardous waste onto or into the land, air, or water, (2) the accidental spilling, leaking, pumping, emitting, emptying, or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes into or on any land or water

spill prevention control and countermeasure plan — a plan required to be developed and implemented by onshore facilities that includes physical structures and other measures to respond to and prevent spills of oil or hazardous substances from reaching navigable waters

standard operating procedure — a document which describes in detail an operation, analysis, or action which is commonly accepted as the preferred method for performing certain routine or repetitive tasks

storage of hazardous waste — the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste

Superfund — legislation creating an industry supported fund to pay for the cost of clean-up or damages associated with oil and hazardous substance spills and abandoned hazardous waste disposal sites, PL 96-510, see CERCLA

surface water — water that flows exclusively across the surface of the land from the point of application to the point of discharge

T

tank — a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials which provide structural support

TDS — the total dissolved solids as determined by use of the method specified in 40 CFR Part 136

toxic pollutant — (1) those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions or physical deformations, in such organisms or their offspring, (2) any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act

toxic substances — a chemical or mixture that may present an unreasonable risk or injury to health or the environment

treatment — when used in connection with hazardous waste, any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume

TSD — treatment, storage or disposal facilities

U

underground storage tank — any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated

substances, and the volume of which is 10 % or more beneath the surface of the ground, such term does not include any, (A) farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes; (B) tank used for storing heating oil for consumptive use on the premises where stored; (C) septic tank; (D) pipeline facility regulated under (i) the Natural Gas Pipeline Safety Act of 1968, (ii) the Hazardous Liquid Pipeline Safety Act of 1979, or (iii) which is an intrastate pipeline facility regulated under state laws comparable to the provisions of law referred to in clause (i) or (ii) of this subparagraph; (E) surface impoundment, pit, pond, or lagoon; (F) storm water or waste water collection system; (G) flow through process tank; (H) liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or; (I) storage tank situated in an underground area if the storage tank is situated upon or above the surface of the floor, the term underground storage tank shall not include any pipes connected to any tank which is described in subparagraphs (A) through (I)

uppermost aquifer – the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary

used oil – any oil which has been (A) refined from crude oil, (B) used, and (C) as a result of such use, contaminated by physical or chemical impurities

UST – underground storage tank

V

violation – any incident of excess emission, regardless of the circumstances of the occurrence

W

waste – (1) unwanted materials left over from manufacturing processes, refuse from places of human or animal habitation, (2) any solid liquid, semisolid, or contained gaseous material that results from the production of a chemical substance identified in paragraph (b) of this section and which is to be disposed

waste oil – used products primarily derived from petroleum, which include, but are not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids, hydraulic fluids, and dielectric fluids

well – (1) any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in, (2) a well is a permanent, complete enclosure around a fixed ladder, which is attached to the walls of

the well, proper clearances for well will provide the person who must climb the ladder the same protection as a cage

wetlands — those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, wetlands generally include swamp, marshes, bogs, and similar areas

Z

zone of saturation — that part of the earth's crust in which all voids are filled with water

The above regulations have been found in the Code of Federal Regulations, protection of environment and a variety of EPA documents as stated in the 4th edition of the Government Institutes, Inc. environmental glossary.

ATTACHMENT B

REFERENCES

REFERENCES

- Area of Concern Assessments for Precision Bombing Ranges, Small Arms Range, and Areas of Concern 6 and 11, Mountain Home Air Force Base, Idaho, July 1996. Reviewed report presenting results of an area of concern (AOC) assessment conducted in 1995.
- Bailey, R.G. and A.W. Kuchler. 1966. Potential Natural Vegetation of the United States. U.S. Geological Survey. Washington, D.C.
- Environmental Data Resources, Inc. EDR-Radius Map and Geotcheck Report. Search of available environmental records.
- Hazardous Waste Management Plan 3208-96, Mountain Home Air Force Base, Mountain Home, Idaho, August 1996. Reviewed hazardous waste management plan.
- Hazardous Waste Management Plan, Mountain Home Air Force Base, Mountain Home, Idaho, Draft Report, July 1994. Reviewed draft hazardous waste management plan.
- Hazardous Waste Minimization Review and Plan Mountain Home Air Force Base, Mountain Home, Idaho, October 1993. Reviewed policy to reduce waste and minimize impacts on the environment.
- HAZMAT Emergency Planning and Response Plan, Mountain Home Air Force Base, Mountain Home, Idaho, July 1995. Reviewed plan providing emergency response guidelines for hazardous material spills.
- Idaho Department of Health and Welfare, Division of Environmental Quality. 1995. Closure, Post-Closure Care and Corrective Action Management Unit (CAMU) Permit for Envirosafe Services of Idaho, Inc. (ESII) EPA ID No. IDD000773952.
- Idaho Department of Health and Welfare, Division of Environmental Quality. 1990. RCRA Facility Assessment for Mountain Home Air Force Base, Idaho. November 30.
- Opportunity Assessment Report for Mountain Home Air Force Base, Mountain Home, Idaho, June 1994. Reviewed results of baseline waste generation survey for Mountain Home AFB, representing the results of the opportunity assessment.
- Parlman, D.J. 1982. Compilation of Groundwater Quality Data for Selected Wells in Elmore, Owyhee, Ada, and Canyon Counties, Idaho, 1945 through 1982. U.S. Geological Survey, Open-File Report 83-89. Prepared in cooperation with the Idaho Department of Water Resource. Boise.
- Soil Survey of Owyhee County, Idaho. 1987. Identified soil types and land forms on proposed parcel.
- U.S.D.A. Farm Services Aerial Photographs. Reviewed aerial photographs of parcels and surrounding properties.

U.S. Geological Survey Topographical Map. Reviewed topography of parcels and surrounding properties.

ATTACHMENT C

INTERVIEWS



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH WING (ACC)
MOUNTAIN HOME AIR FORCE BASE, IDAHO**

31 January 1997

366 WG/DS
366 Gunfighter Avenue, Suite 331
Mountain Home AFB ID 83648-5299

Mr. Frank Bachman
P. O. Box 186
Bruneau ID 83604

Dear Mr. Bachman

The United States Air Force's Air Combat Command is proposing a new training range in southern Idaho to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base. The proposed action includes the development and use of a 12,000-acre tactical training range, five simulated target areas, and 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County.

Most of the lands to be used for the proposed training range must be withdrawn from public use in accordance with the provisions of the Engle Act. Prior to acquiring any land, the Air Force is conducting an environmental survey of the land. Among other issues, we are studying the proposed sites to determine if any have ever been exposed to environmental contamination, such as chemical or fuel spills.

Because personal knowledge of the area often offers the best information, we are seeking the assistance of adjacent landowners and those individuals that are familiar with the area. Enclosed are maps showing the area with which we need your help and a 16-question survey addressing previous land uses. If you could complete the survey to the best of your knowledge, it would help in the assessment of the property.

Thank you for your cooperation. If you have any questions about this or any other Enhanced Training in Idaho issue, please call me at (208) 828-2366.

Sincerely


BILLY F. RICHEY, Colonel, USAF
Director of Staff

Global Power for America

Question #1: Is the subject property or any adjoining property used for industrial purposes? Is there any record or knowledge of the property or any adjoining property being used for industrial purposes in the past? How long have you had first hand knowledge of the property?

NO

Question #2: Do any of the following uses or activities currently take place on the property or any adjoining property: dry cleaners; photo developing laboratory; commercial printing facility; gasoline station; motor repair facility; junkyard; landfill; or waste treatment, storage, disposal, processing, or recycling facility? Have any of these activities taken place on the property or any adjoining property in the past?

NO

Question #3: Are there currently, or have there been any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals of more than five-gallons per individual container, or a total volume of more than 50-gallons in multiple containers stored or used at the property?

NO

Question #4: Are there currently or have there been any industrial drums or sacks of chemicals located on the property?

NO

Question #5: Has fill dirt ever been brought onto the property? If so, is the origin of the fill dirt known?

NO

Question #6: Are there currently or have there ever been any pits, ponds, or lagoons located on the subject property that are associated with waste disposal or treatment?

NO

Question #7: Is there currently or has there been any stained or discolored soil on the property?

NO

Question #8: Are there currently or have there been any underground storage tanks or above ground storage tanks on the property? Is there evidence of any vent pipes, fill pipes, or access ports indicating possible fill pipe locations adjacent to any structures or located on the subject property?

NO

Question #9: Are there currently or have there been any drains, walls, or flooring located within structures located on the property that are stained by substances other than water and/or are emitting foul odors?

NO

Question #10: Is the property served by a private or non-public water system?

NO

Question #11: Are you aware of any environmental liens or governmental notifications relating to past or current violations of environmental laws with respect to the property or structures located on the property?

NO

Question #12: Are you aware of any previous environmental site assessment of the property:

NO

Question #13: Are there any past, threatened, or pending lawsuits or administrative proceedings concerning hazardous substance or petroleum products involving the property?

NO

Question #14: Is waste water discharged onto or adjacent to the subject property?

NO

Question #15: Have hazardous substances or petroleum products, automotive or industrial batteries, tires, or other waste materials been dumped, buried, or burned on the subject property or adjacent properties?

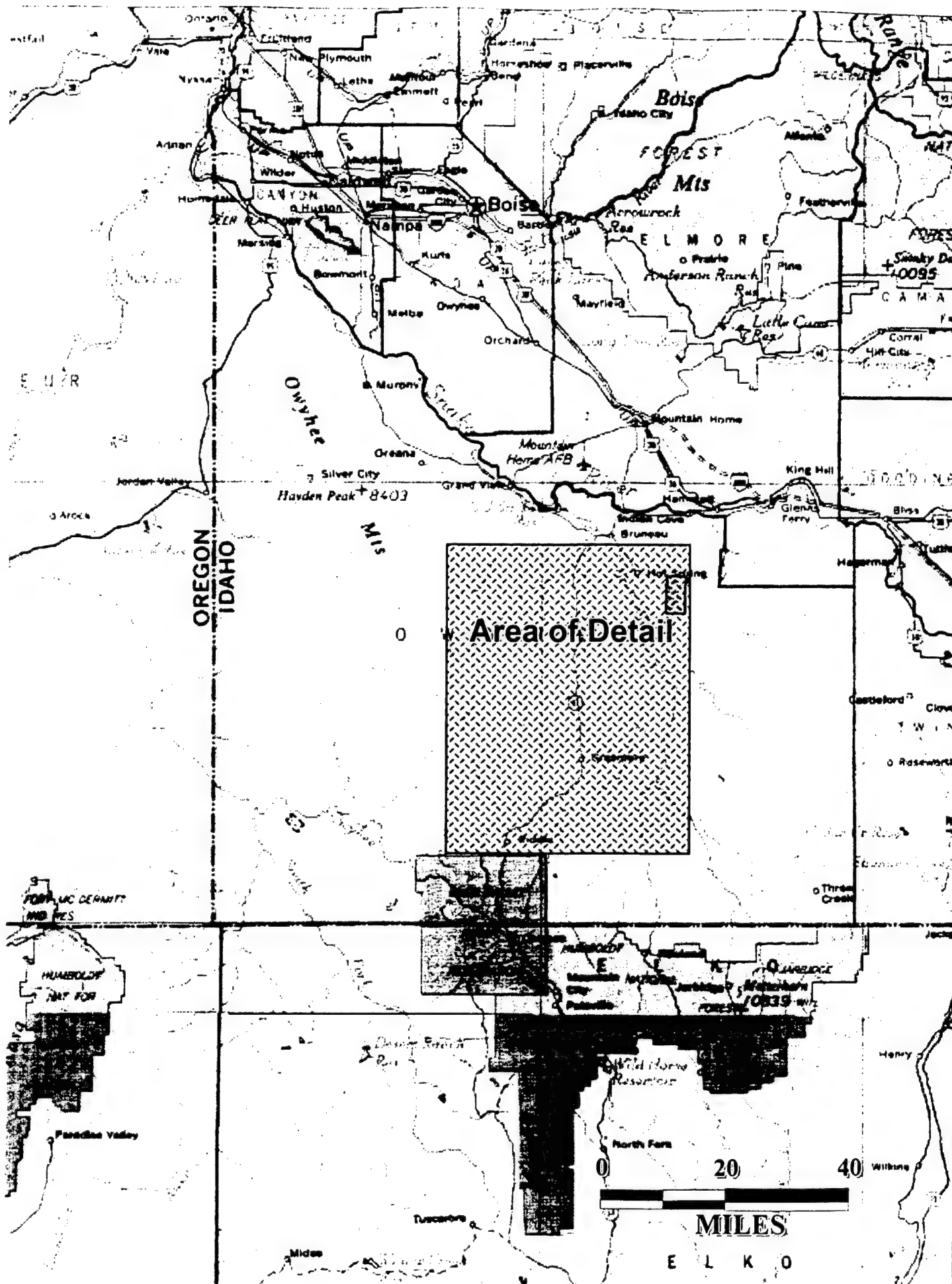
NO

Question #16: Are there or have there been any electrical transformers, capacitors, or any hydraulic equipment located on the property or adjacent properties?

NO

NOTE: May be tires, automotive batteries, fuel spills? located on private land at Hrosemere Station - only;

Frank Backus



Area of Detail

Saylor Creek
Training Range

State
Hwy
51

Grasmere

Grasmere
EC Site

Middle

- Stream
- Road
- Highway
- State or Private Land



0 5 10
Miles

Question #1: Is the subject property or any adjoining property used for industrial purposes? Is there any record or knowledge of the property or any adjoining property being used for industrial purposes in the past? How long have you had first hand knowledge of the property?

Question #2: Do any of the following uses or activities currently take place on the property or any adjoining property: dry cleaners; photo developing laboratory; commercial printing facility; gasoline station; motor repair facility; junkyard; landfill; or waste treatment, storage, disposal, processing, or recycling facility? Have any of these activities taken place on the property or any adjoining property in the past?

Question #3: Are there currently, or have there been any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals of more than five gallons per individual container, or a total volume of more than 50-gallons in multiple containers stored or used at the property?

Old car west of clover Road
south of clover Butte

Question #4: Are there currently or have there been any industrial drums or sacks of chemicals located on the property?

Question #5: Has fill dirt ever been brought onto the property? If so, is the origin of the fill dirt known?

Question #6: Are there currently or have there ever been any pits, ponds, or lagoons located on the subject property that are associated with waste disposal or treatment?

Question #7: Is there currently or has there been any stained or discolored soil on the property?

Question #8: Are there currently or have there been any underground storage tanks or above ground storage tanks on the property? Is there evidence of any vent pipes, fill pipes, or access ports indicating possible fill pipe locations adjacent to any structures or located on the subject property?

Question #9: Are there currently or have there been any drains, walls, or flooring located within structures located on the property that are stained by substances other than water and/or are emitting foul odors?

Question #10: Is the property served by a private or non-public water system?

there are extensive Livestock water Systems over most of the area.

Question #11: Are you aware of any environmental liens or governmental notifications relating to past or current violations of environmental laws with respect to the property or structures located on the property?

Question #12: Are you aware of any previous environmental site assessment of the property:

Question #13: Are there any past, threatened, or pending lawsuits or administrative proceedings concerning hazardous substance or petroleum products involving the property?

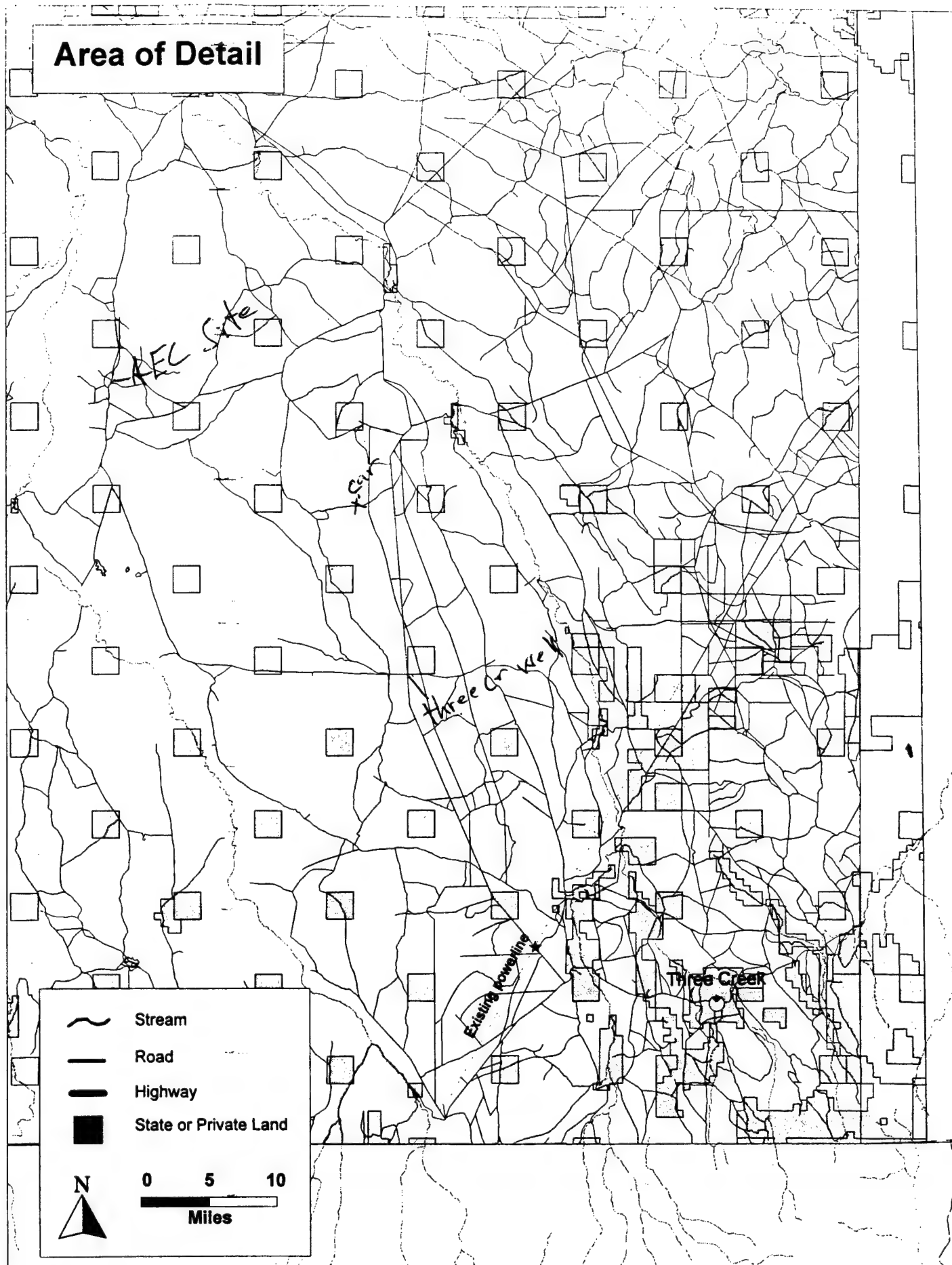
Question #14: Is waste water discharged onto or adjacent to the subject property?

Question #15: Have hazardous substances or petroleum products, automotive or industrial batteries, tires, or other waste materials been dumped, buried, or burned on the subject property or adjacent properties?

there has been motor oil dumped on the ground ~~at~~ over the years at the
Question #16: Are there or have there been any electrical transformers, capacitors, ^{three C.} or any hydraulic equipment located on the property or adjacent properties? Well.

✓ the AE(Site) south of Winter
Camp (Atomic Energy Commission-)

Area of Detail





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH WING (ACC)
MOUNTAIN HOME AIR FORCE BASE, IDAHO

31 January 1997

366 WG/DS
366 Gunfighter Avenue, Suite 331
Mountain Home AFB ID 83648-5299

Mr. J. Strickland
HC 85 Box 106
Bruneau ID 83604

Dear Mr. Strickland

The United States Air Force's Air Combat Command is proposing a new training range in southern Idaho to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base. The proposed action includes the development and use of a 12,000-acre tactical training range, five simulated target areas, and 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County.

Most of the lands to be used for the proposed training range must be withdrawn from public use in accordance with the provisions of the Engle Act. Prior to acquiring any land, the Air Force is conducting an environmental survey of the land. Among other issues, we are studying the proposed sites to determine if any have ever been exposed to environmental contamination, such as chemical or fuel spills.

Because personal knowledge of the area often offers the best information, we are seeking the assistance of adjacent landowners and those individuals that are familiar with the area. Enclosed are maps showing the area with which we need your help and a 16-question survey addressing previous land uses. If you could complete the survey to the best of your knowledge, it would help in the assessment of the property.

Thank you for your cooperation. If you have any questions about this or any other Enhanced Training in Idaho issue, please call me at (208) 828-2366.

Sincerely

Billy F. Richey
BILLY F. RICHEY, Colonel, USAF
Director of Staff

*Thank you for seeking any
input that I might have -
this, at least, makes me feel
included.*

*Sincerely,
Gerr Strickland* Global Power for America

Question #1: Is the subject property or any adjoining property used for industrial purposes? Is there any record or knowledge of the property or any adjoining property being used for industrial purposes in the past? How long have you had first hand knowledge of the property?

No - All my life -

Question #2: Do any of the following uses or activities currently take place on the property or any adjoining property: dry cleaners; photo developing laboratory; commercial printing facility; gasoline station; motor repair facility; junkyard; landfill; or waste treatment, storage, disposal, processing, or recycling facility? Have any of these activities taken place on the property or any adjoining property in the past?

No

Question #3: Are there currently, or have there been any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals of more than five-gallons per individual container, or a total volume of more than 50-gallons in multiple containers stored or used at the property?

No

Question #4: Are there currently or have there been any industrial drums or sacks of chemicals located on the property?

No

Question #5: Has fill dirt ever been brought onto the property? If so, is the origin of the fill dirt known?

No

Question #6: Are there currently or have there ever been any pits, ponds, or lagoons located on the subject property that are associated with waste disposal or treatment?

No

Question #7: Is there currently or has there been any stained or discolored soil on the property?

No

Question #8: Are there currently or have there been any underground storage tanks or above ground storage tanks on the property? Is there evidence of any vent pipes, fill pipes, or access ports indicating possible fill pipe locations adjacent to any structures or located on the subject property?

No

Question #9: Are there currently or have there been any drains, walls, or flooring located within structures located on the property that are stained by substances other than water and/or are emitting foul odors?

No

Question #10: Is the property served by a private or non-public water system?

No

Question #11: Are you aware of any environmental liens or governmental notifications relating to past or current violations of environmental laws with respect to the property or structures located on the property?

No

Question #12: Are you aware of any previous environmental site assessment of the property:

no

Question #13: Are there any past, threatened, or pending lawsuits or administrative proceedings concerning hazardous substance or petroleum products involving the property?

No

Question #14: Is waste water discharged onto or adjacent to the subject property?

No

Question #15: Have hazardous substances or petroleum products, automotive or industrial batteries, tires, or other waste materials been dumped, buried, or burned on the subject property or adjacent properties?

NO

Question #16: Are there or have there been any electrical transformers, capacitors, or any hydraulic equipment located on the property or adjacent properties?

NO

Question #1: Is the subject property or any adjoining property used for industrial purposes? Is there any record or knowledge of the property or any adjoining property being used for industrial purposes in the past? How long have you had first hand knowledge of the property?

AREA USED FOR GRAZZING, TRAPPING, HARVESTING POSTS + WOOD

MY FAMILY CAME TO THE AREA IN 1885. - HERE EVER SINCE.

Question #2: Do any of the following uses or activities currently take place on the property or any adjoining property: dry cleaners; photo developing laboratory; commercial printing facility; gasoline station; motor repair facility; junkyard; landfill; or waste treatment, storage, disposal, processing, or recycling facility? Have any of these activities taken place on the property or any adjoining property in the past?

GRASMER'S STATION - GASOLINE, MOTOR REPAIR, JUNK YARD
AND LANDFILL

Question #3: Are there currently, or have there been any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals of more than five-gallons per individual container, or a total volume of more than 50-gallons in multiple containers stored or used at the property?

NOT TO MY KNOWLEDGE

Question #4: Are there currently or have there been any industrial drums or sacks of chemicals located on the property?

NOT TO MY KNOWLEDGE

Question #5: Has fill dirt ever been brought onto the property? If so, is the origin of the fill dirt known?

NOT TO MY KNOWLEDGE



Mr. William Tindall
HC 86 Box 28
Bruneau, ID 83604

William Tindall

Question #6: Are there currently or have there ever been any pits, ponds, or lagoons located on the subject property that are associated with waste disposal or treatment?

Question #7: Is there currently or has there been any stained or discolored soil on the property?

Question #8: Are there currently or have there been any underground storage tanks or above ground storage tanks on the property? Is there evidence of any vent pipes, fill pipes, or access ports indicating possible fill pipe locations adjacent to any structures or located on the subject property?

Question #9: Are there currently or have there been any drains, walls, or flooring located within structures located on the property that are stained by substances other than water and/or are emitting foul odors?

Question #10: Is the property served by a private or non-public water system?

Question #11: Are you aware of any environmental liens or governmental notifications relating to past or current violations of environmental laws with respect to the property or structures located on the property?

Question #12: Are you aware of any previous environmental site assessment of the property:

BLM. ASSESSMENT FOR LIVESTOCK IMPROVEMENTS.

Question #13: Are there any past, threatened, or pending lawsuits or administrative proceedings concerning hazardous substance or petroleum products involving the property?

NOT TO MY KNOWLEDGE

Question #14: Is waste water discharged onto or adjacent to the subject property?

NOT TO MY KNOWLEDGE

Question #15: Have hazardous substances or petroleum products, automotive or industrial batteries, tires, or other waste materials been dumped, buried, or burned on the subject property or adjacent properties?

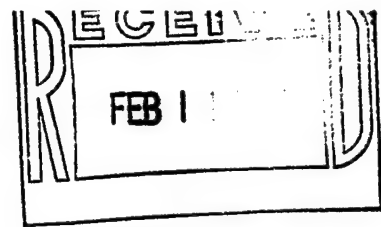
SMALL AMOUNTS

Question #16: Are there or have there been any electrical transformers, capacitors, or any hydraulic equipment located on the property or adjacent properties?

SMALL AMOUNTS



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 366TH WING (ACC)
MOUNTAIN HOME AIR FORCE BASE, IDAHO



31 January 1997

366 WG/DS
366 Gunfighter Avenue, Suite 331
Mountain Home AFB ID 83648-5299

Mr. Chuck Jones
P. O. Box 27
Boise ID 83707

Dear Mr. Jones

The United States Air Force's Air Combat Command is proposing a new training range in southern Idaho to provide realistic training opportunities locally for the aircrews stationed at Mountain Home Air Force Base. The proposed action includes the development and use of a 12,000-acre tactical training range, five simulated target areas, and 30 small emitter sites in southwestern Idaho in the eastern half of Owyhee County.

Most of the lands to be used for the proposed training range must be withdrawn from public use in accordance with the provisions of the Engle Act. Prior to acquiring any land, the Air Force is conducting an environmental survey of the land. Among other issues, we are studying the proposed sites to determine if any have ever been exposed to environmental contamination, such as chemical or fuel spills.

Because personal knowledge of the area often offers the best information, we are seeking the assistance of adjacent landowners and those individuals that are familiar with the area. Enclosed are maps showing the area with which we need your help and a 16-question survey addressing previous land uses. If you could complete the survey to the best of your knowledge, it would help in the assessment of the property.

Thank you for your cooperation. If you have any questions about this or any other Enhanced Training in Idaho issue, please call me at (208) 828-2366.

Sincerely


BILLY F. RICHEY, Colonel, USAF
Director of Staff

Global Power for America

Question #1: Is the subject property or any adjoining property used for industrial purposes? Is there any record or knowledge of the property or any adjoining property being used for industrial purposes in the past? How long have you had first hand knowledge of the property?

NO KNOWN INDUSTRIAL USE -

2 YEARS

Question #2: Do any of the following uses or activities currently take place on the property or any adjoining property: dry cleaners; photo developing laboratory; commercial printing facility; gasoline station; motor repair facility; junkyard; landfill; or waste treatment, storage, disposal, processing, or recycling facility? Have any of these activities taken place on the property or any adjoining property in the past?

GASOLINE - AT GRASMERE AND RIDGE

Question #3: Are there currently, or have there been any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals of more than five-gallons per individual container, or a total volume of more than 50-gallons in multiple containers stored or used at the property?

NONE KNOWN

Question #4: Are there currently or have there been any industrial drums or sacks of chemicals located on the property?

NONE KNOWN

Question #5: Has fill dirt ever been brought onto the property? If so, is the origin of the fill dirt known?

NONE KNOWN

Question #6: Are there currently or have there ever been any pits, ponds, or lagoons located on the subject property that are associated with waste disposal or treatment?

NONE KNOWN

Question #7: Is there currently or has there been any stained or discolored soil on the property?

NONE KNOWN

Question #8: Are there currently or have there been any underground storage tanks or above ground storage tanks on the property? Is there evidence of any vent pipes, fill pipes, or access ports indicating possible fill pipe locations adjacent to any structures or located on the subject property?

NONE KNOWN, EXCEPT FOR GRASMERE & RIDDLE GASOLINE STATIONS

Question #9: Are there currently or have there been any drains, walls, or flooring located within structures located on the property that are stained by substances other than water and/or are emitting foul odors?

NONE KNOWN

Question #10: Is the property served by a private or non-public water system?

NO

Question #11: Are you aware of any environmental liens or governmental notifications relating to past or current violations of environmental laws with respect to the property or structures located on the property?

NO

Question #12: Are you aware of any previous environmental site assessment of the property:

No

Question #13: Are there any past, threatened, or pending lawsuits or administrative proceedings concerning hazardous substance or petroleum products involving the property?

NONE KNOWN

Question #14: Is waste water discharged onto or adjacent to the subject property?

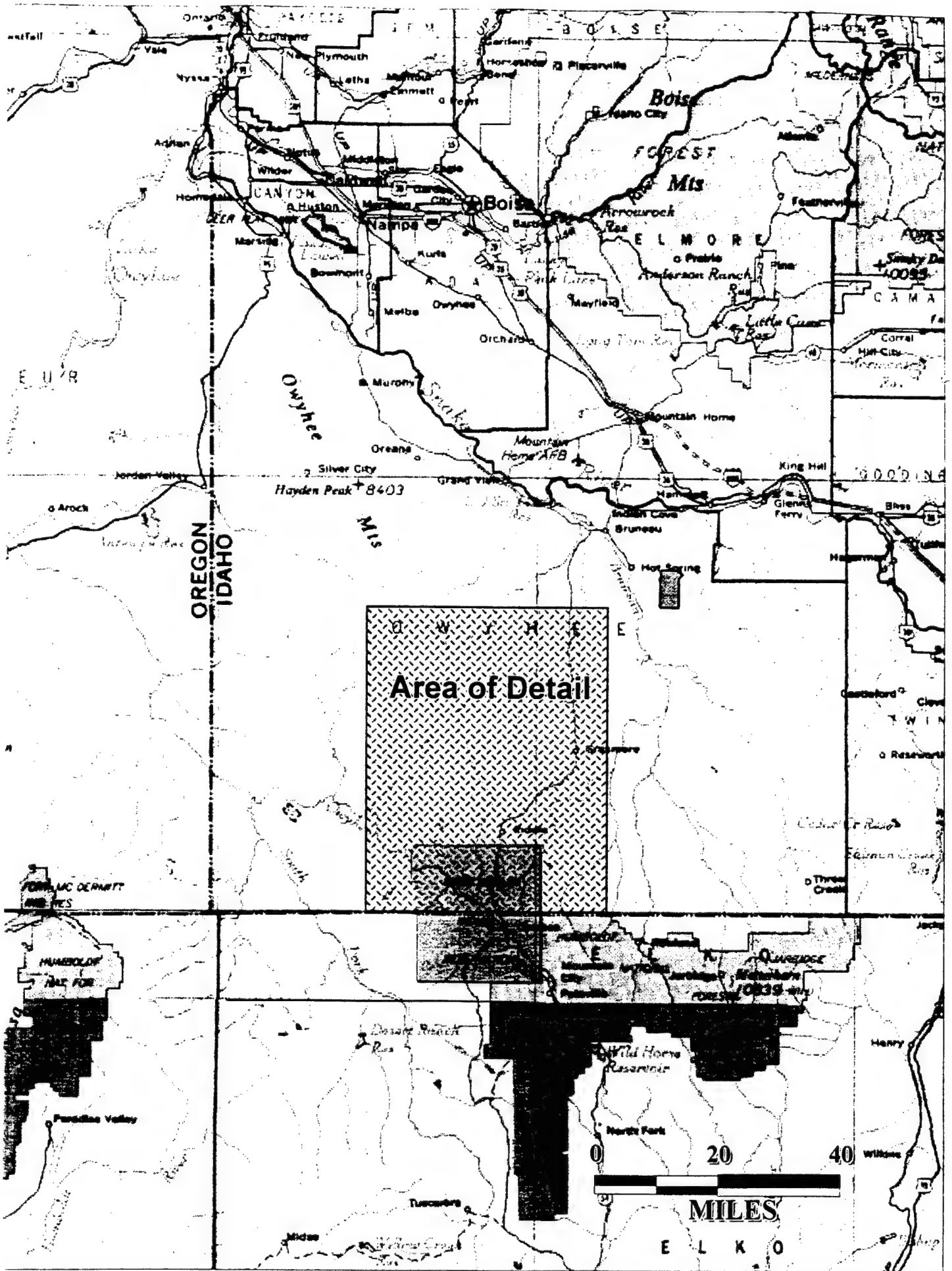
NONE KNOWN

Question #15: Have hazardous substances or petroleum products, automotive or industrial batteries, tires, or other waste materials been dumped, buried, or burned on the subject property or adjacent properties?

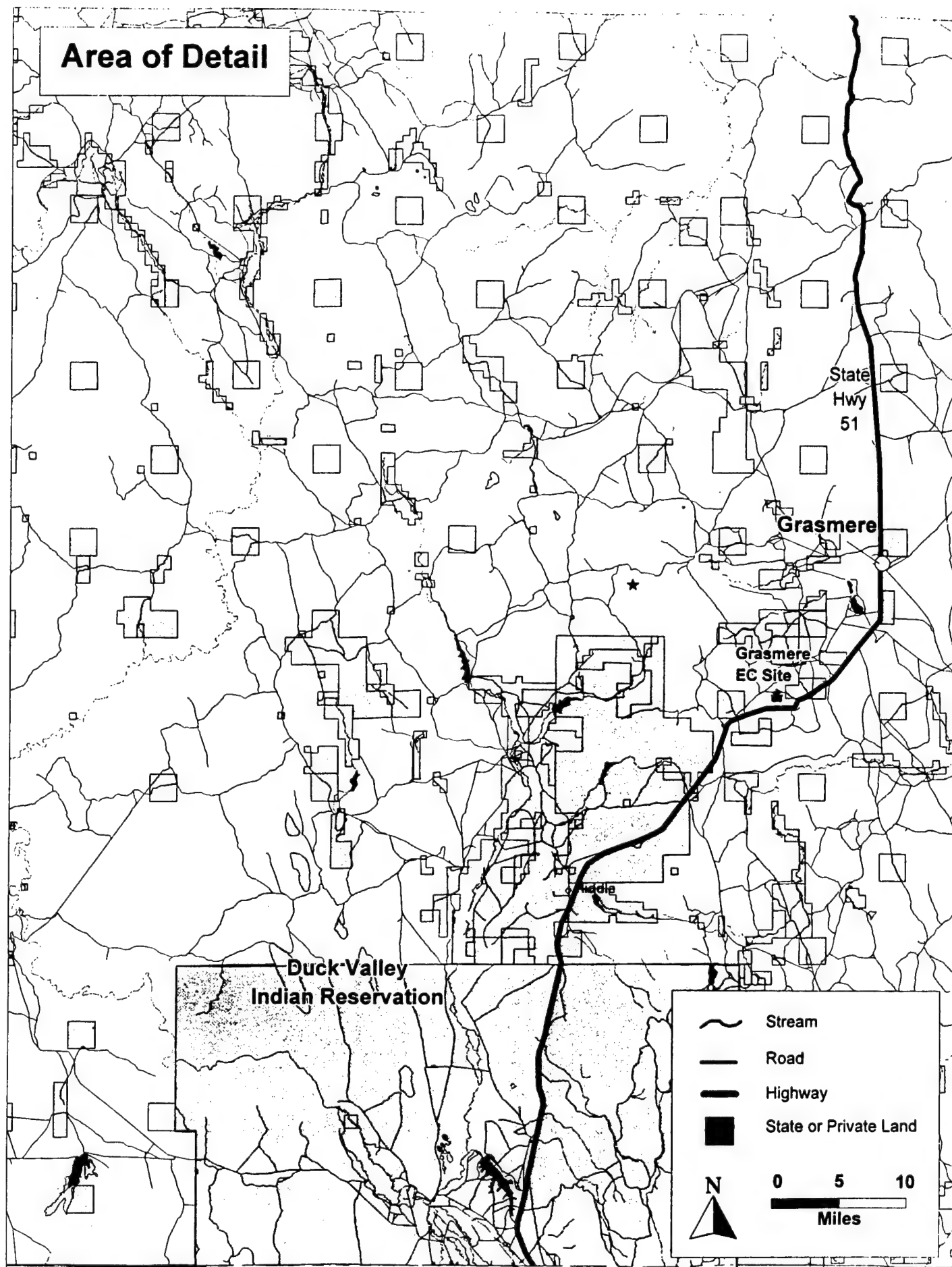
NONE KNOWN

Question #16: Are there or have there been any electrical transformers, capacitors, or any hydraulic equipment located on the property or adjacent properties?

NONE KNOWN



Area of Detail



APPENDIX D
MINERALS INVENTORY

Enhanced Training in Idaho Minerals Inventory

I. INTRODUCTION

This report was prepared in accordance with Section 204 (1) of the Federal Land Policy and Management Act of October 1976 and includes an analysis of the known mineral potential as required by 43 CFR 2310.3-2(b) (3) (iii). The purpose of this report is to present the results of an evaluation of the mineral potential of lands to be withdrawn from operation of the public land laws for the Enhanced Training in Idaho (ETI). The laws include the mining laws, but not the mineral leasing laws

The following presents the results of field research in August 1996, a search for past and current claims and leases in the Bureau of Land Management (BLM) and Idaho Department of Lands (IDL) files, research into the geologic and mining history of the area, and the analysis of four stream samples.

II. DESCRIPTION OF PROPOSED ACTION

The Air Force identified three alternatives to provide enhanced training for its 366th Wing located in Mountain Home, Idaho. Each alternative consists of a 12,000-acre tactical training range, five no-drop target areas, and 30 emitter sites. Ten of the emitter sites are one-acre sites and the remaining 20 sites are one-quarter-acre sites. Alternatives vary only in the location of the 12,000-acre training range and the location of the four five-acre no-drop target areas. The 640-acre target area and 30 emitter sites remain the same among alternatives.

For each alternative, the Air Force proposes to withdraw only federally held lands. This refers to most of the land within the proposed 12,000-acre training ranges, the 640-acre no-drop target, three or four five-acre no-drop targets (depending on the alternative), and nine one-acre emitter sites. One of the selected five-acre no-drop target areas and one one-acre emitter site are located on state lands and thus would not be withdrawn. Alternatives B and C would include the state-owned five-acre no-drop target area and, therefore, these alternatives would involve the withdrawal of only three five-acre no-drop target areas. Alternative D would involve the withdrawal of four federally-owned five-acre no-drop target areas. Under all alternatives, for the 20 one-quarter-acre emitter sites, roads, and powerlines, the Air Force proposes to enter into land use agreements, such as rights-of-way or leases, with the appropriate land holder or manager (State of Idaho or BLM) rather than withdraw such small parcels of land.

The ETI Environmental Impact Statement (EIS) analyzes four alternatives, including the No-Action alternative, referred to as Alternative A. The proposed withdrawals for Alternatives B, C, and D are described here and listed in Table D-1. For Alternative B, the Air Force proposes to withdraw about 11,864 acres of public land for military use. This consists of over 11,200 acres within the proposed training range, the 640-acre no-drop target, three five-acre no-drop target areas, and nine one-acre emitter sites. The remaining lands are state-owned lands, and

would not be withdrawn. The Department of Defense (DoD) would instead enter into lease agreements for use of state lands.

Table D-1. Approximate Acreages of Public Land Withdrawals for Each Alternative

Project Element	Alternative B	Alternative C	Alternative D
12,000-Acre Training Range	11,200	8,600	10,600
640-Acre Target Area	640	640	640
5-Acre Target Areas	15	15	20
1.0-Acre Emitter Sites	9	9	9
Total	11,864	9,264	11,269

For Alternative C, the Air Force proposes to withdraw about 9,264 acres of public land for military use. Like Alternative B, this consists mostly of land within the proposed training range and also includes the 640-acre no-drop target area, three five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. DoD would instead enter into lease agreements for use of state lands.

Alternative D would involve withdrawal of about 11,269 acres of public land. Again, most of this land lies within the proposed training range; it also includes the 640-acre no-drop target, four five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. DoD would instead enter into lease agreements for use of state lands.

III. EXISTING CONDITIONS

Lands

The lands proposed for withdrawal are all public lands managed by the BLM, located approximately 60 miles southeast of Boise, Idaho, in Owyhee County, and are further described in Table D-2.

Physical Features

The proposed training ranges are all located within the Snake River Plain (SRP) geologic and physiographic province. The SRP volcanic province encompasses both a physiographic lowland, called the SRP, and the surrounding mountains, including the Owyhee Mountains to the south, the Bennett Hills to the north, and the Cassia Mountains to the east. The SRP itself was formed as the result of two tectonic events. The western SRP, from the Oregon border to the area of Mountain Home, Idaho, is a graben or depression that originated from extensional faulting similar to that of the Basin and Range Province in Nevada and eastern Idaho. The central and eastern SRP is part of a southwest-northeast volcanic/tectonic trend that extends from northern Nevada, across the southern part of Idaho, to the Yellowstone National Park area in northwestern Wyoming (Jenks and Bonnicksen 1989).

Table D-2. Location of Alternative Training Training Ranges

Site Alternative		Location
Clover Butte Training Range	T. 12 S., R. 8 E., B.M.	Sec. 13: All, Sec. 14: All, Sec. 15: E 1/2, Sec. 22: E 1/2, Sec. 23: All, Sec. 24: All, Sec. 25: All, Sec. 26: All, Sec. 27: E 1/2, Sec. 34: E 1/2, Sec. 35: All, Sec. 36: All
	T. 12 S., R. 9 E., B.M.	Sec. 17, 18, 19, 20, 29, 30, 31, 31: All
Grasmere Training Range	T. 11 S., R. 4 E., B.M.	Sec. 25, 26, 27, 28, 33, 34, 35, 36: All
	T. 12 S., R. 4 E., B.M.	Sec. 1: All, Sec. 2: All, Sec. 3: All, Sec. 4: All, Sec. 9: All, Sec. 10: All, Sec. 11: All, Sec. 12: All, Sec. 13: NW and NE 1/4 NW 1/4; NW 1/4 NE 1/4, Sec. 14: N 1/4, Sec. 15: N 1/4, Sec. 16: N 1/4
Juniper Butte Training Range	T. 12 S., R. 9 E., B.M.	Sec. 35: SE 1/4, Sec. 36: S 1/2,
	T. 12 S., R. 10 E., B.M.	Sec. 31: S 1/2, Sec. 32: S 1/2
	T. 13 S., R. 9 E., B.M.	Sec. 2: E 1/2, Sec. 1: All, Sec. 11: E 1/2, Sec. 12: All, Sec. 13: All, Sec. 24: All
	T. 12 S., R. 10 E., B.M.	Sec. 4: All except NE 1/4, Sec. 5: All, Sec. 6: All, Sec. 7: All, Sec. 8: All, Sec. 9: All, Sec. 16: All, Sec. 17: All, Sec. 18: All, Sec. 19: All, Sec. 20: All, Sec. 21: All

The ranges lie within an area that is the intersection of the western SRP graben and the southwest-northeast volcanic trend. Topographic features in this area include the Inside, Bruneau, Blackstone, and J-P Deserts, and the Big Hill. All of these features formed as a result of volcanic eruptions. The topography in the area is relatively subdued, with the volcanic vents forming the only hills or buttes in much of the area. The entire area is cut by the deep canyons of the Bruneau and Jarbidge rivers, and their tributaries, Sheep and Clover creeks.

Geology

The SRP volcanic province began to form at the intersection of the present states of Nevada, Oregon, and Idaho approximately 14 to 17 million years ago (Bonnichsen et al. 1988). The volcanism was bimodal, first erupting rhyolite ash-flow tuffs and lava flows, followed by basalt shield volcanoes. In the area surrounding the sites, all of the volcanic units were erupted from the Bruneau-Jarbidge eruptive center, a large caldera-like feature that formed from 11 to 6 million years ago in the area from Grasmere on the west, to the Nevada border on the south, to Bruneau on the north, and to east of Clover Creek (Bonnichsen 1982a). The first units that erupted from the Bruneau-Jarbidge eruptive center were a series of 11 large ash flow tuffs, collectively called the Cougar Point Tuff (Bonnichsen and Citron 1982). The eruption of these major ash flows was followed by subsidence of the Bruneau-Jarbidge eruptive center. The resulting caldera was then filled from 9 to 6 million years with a series of 12 or more large rhyolite lava flows, including the Sheep Creek, Dorsey Creek, and Bruneau-Jasper Rhyolites (Bonnichsen 1982b). The final volcanic activity was the eruption of more than 40 small basalt

shield volcanoes from 8 to 4 million years, whose flows form the present nearly flat topography that underlies most of the actual site locations (Jenks et al. 1984; Jenks and Bonnicksen 1985).

During the later stages of the eruptions from the Bruneau-Jarbridge eruptive center, the western SRP graben also began to form. The structural subsidence caused a large lake, Lake Idaho, to form from approximately 8 to 1.5 million years ago. This Lake Ontario-sized body of water filled the western SRP from the Oregon border on the west to approximately the area of Twin Falls on the east. The sediments deposited within the lake basin are mapped as the Idaho Group sediments. The basalt flows erupting from the Bruneau-Jarbridge eruptive center flowed into the Lake Idaho basin, and interfingered with the lake sediments. These units are all exposed within the northern part of the region.

The ancestral SRP drainage was captured approximately 1.5 million years ago by the Columbia River drainage cutting through the area of Hells Canyon in west-central Idaho. With this event Lake Idaho slowly drained and the present canyons of the Snake, Bruneau, and Jarbridge rivers began to downcut. The Snake River canyon was deepened and widened by the Bonneville Flood, which occurred approximately 14,500 years before present. The flood was caused by the catastrophic drainage of the ancestral Great Salt Lake north through the Snake River canyon. The increased depth of the Snake River canyon to approximately its present size in turn caused increased downcutting of all of the tributary canyons, including the Bruneau and Jarbridge canyons. The youngest geologic features in the area are the stream alluvium deposits in the river and stream bottoms and the intermittent lake sediments that are deposited by wind and water erosion in depressions in the surface of the basalt flows.

Mineral Potential

The potential for mineral resources is a prediction of the likelihood of the occurrence of these resources. The occurrence of a mineral resource does not necessarily imply that the mineral can be economically exploited or is likely to be developed; mineral occurrence potential includes both exploitable and potentially exploitable occurrences. The potential for the occurrence of a mineral resource also does not imply that the quality and quantity of the resource are known. The BLM Manual 3031 (1985) explains the mineral potential classification used in this report. A portion of the manual is reprinted and attached to this report. The following discussion applies to all of the proposed training ranges.

Claims and Operations. According to the claim and lease files of the BLM and the IDL, no mines or prospects are located within the boundaries of any of the proposed training ranges. Only one range is within 5 miles of active leases or claims. The Guano claims, on the east side of Clover Creek, are 2 miles away from the east side of the Juniper Butte Training Range.

Overall Mineral Potential. Most of the region surrounding the sites was covered by a mineral resources investigation made by the U.S. Geological Survey (USGS) in the late 1980s for the Bruneau River, Jarbridge River, Sheep Creek West, and Duncan Creek Wilderness Study Areas (WSAs) (Lawrence et al. 1988, McIntyre et al. 1987). They undertook a reconnaissance geochemical study, collecting stream sediment and rock samples. Geochemical analyses of the samples showed anomalous values for barium (5,000 to >10,000 ppm), tin (>2,000 ppm), thorium (200-500 ppm), silver (10 ppm), lead (100 to 10,000 ppm) and bismuth (20 ppm). The

researchers suggest that the high barium levels are related to nearby hot spring activity or are from cavity or fracture fillings in the bedrock. No barite veins were noted in the study. They did not have an explanation for the high tin values, but related the presence of the high thorium values to the presence of the mineral zircon in the stream sediment concentrates. The high lead values were thought to possibly result from contamination by human activities, because the extremely high value samples were collected in areas of more intense human activity along jeep and pack trails. The single high silver value was found in one isolated area in the northern part of the region, near Miller Water. It is thought to be the result of an isolated mineralized fracture. The bismuth high value was not explained.

In general, the mineral resource investigation rates the mineral resource potential as low throughout all of the evaluated WSA areas. They made this rating with a C certainty level – the available information gives a good indication of the level of mineral resource potential.

During field investigations for this report, four stream sediment samples were collected for analysis. Samples AF-1, AF-2, and AF-3 were all collected from the proposed Grasmere training range. Sample AF-4 was collected from the proposed Clover Butte training range. No samples were collected at the proposed Juniper Butte training range. The analyses were run for 27 elements, gold, and silver, by SVL Analytical, Inc., Kellogg, ID. The following table summarizes the results for gold and silver, and for all the elements previously found to have anomalous levels in the WSA mineral resource report. All of the analysis results shown in Table D-3 are well below the reported anomalous amounts. The samples also do not show anomalous results for any other elements.

Table D-3. Results of Mineral Sample Analysis

Sample no.	Gold ppb	Silver ppm	Barium ppm	Bismuth ppm	Lead ppm	Tin ppm	Thorium ppm
AF-1	<5	<0.1	58	<10	9	<15	17
AF-2	<5	0.1	64	<10	8	<15	15
AF-3	<5	0.1	100	<10	10	<15	14
AF-4	<5	<0.1	400	<10	18	<15	10

IV. EFFECTS OF PROPOSED ACTION ON MINERAL RESOURCES

The following discussion applies to all three of the proposed training ranges. The subject lands included in all the sites are of zero to very low metallic and industrial mineral potential and do not contain any known mineral deposits that will be developed in the foreseeable future. This rating is made with a D level of certainty – the available data provide abundant direct and indirect evidence to refute the possible existence of mineral resources; therefore, the proposed action would not result in an impact upon mineral resources.

REFERENCES

- Bonnichsen, B., 1982a, The Bruneau-Jarbridge eruptive center, southwestern Idaho, *in* B. Bonnichsen and R.M. Breckenridge, eds., *Cenozoic Geology of Idaho: Idaho Bureau of Mines and Geology Bulletin 26*, p. 237-254.
- Bonnichsen, B., 1982b, Rhyolite lava flows in the Bruneau-Jarbridge eruptive center, southwestern, Idaho, *in* B. Bonnichsen and R.M. Breckenridge, eds., *Cenozoic Geology of Idaho: Idaho Bureau of Mines and Geology Bulletin 26*, p. 283-320.
- Bonnichsen, B., and G. P. Citron, 1982, The Cougar Point Tuff, southwestern Idaho and vicinity, *in* B. Bonnichsen and R.M. Breckenridge, eds., *Cenozoic Geology of Idaho*, Moscow, ID: Idaho Bureau of Mines and Geology Bulletin 26, p. 255-281.
- Bonnichsen, B., W.P. Leeman, M. D. Jenks, and N. Honjo, 1988, Geologic field trip guide to the central and western Snake River Plain, Idaho, emphasizing the silicic volcanic rocks, *in* Link, P.K., and W.R. Hackett, eds., *Guidebook to the Geology of Central and Southern Idaho*, Moscow, ID: Idaho Geological Survey Bulletin 27, p. 247-281.
- Jenks, M.D., and B. Bonnichsen, 1985, Periods of basalt volcanism in the south-central Snake River Plain, Idaho. *Geological Society of America Abstracts*, 17(4): 227.
- Jenks, M.D., and B. Bonnichsen, 1989, Subaqueous basalt eruptions into Pliocene Lake Idaho, *in* V.E. Chamberlain, R.M. Breckenridge, and B. Bonnichsen, eds., *Guidebook to the Geology of Northern and Western Idaho and Surrounding Area*, Moscow, ID: Idaho Geological Survey Bulletin 28, p. 17-34.
- Jenks, M.D., B. Bonnichsen, and N. Hultquist, 1984, Neogene basalt shield volcanoes in the Snake River Plain, Idaho. *Geological Society of America Abstracts*, vol. 16, no. 6, p. 551.
- Lawrence, V.A., D. H. McIntyre, H.D. King, D.M. Kulik, P.R. Moyle, A.R. Buehler, B. Bonnichsen, M.D. Jenks, and J. Bernt, 1988, Mineral resources of the Bruneau River, Jarbridge River, and Sheep Creek West Wilderness Study Areas, Owyhee County, Idaho. *U.S. Geological Survey Bulletin 1720-B*, 19 p.
- McIntyre, D. H., H.D. King, D.M. Kulik, D.L. Sawatzky, R.A. Winters, A.M. Leszykowski, D. F. Kauffman, and B. Bonnichsen, 1988, Mineral resources of the Little Jacks Creek, Big Jacks Creek, and Duncan Creek Wilderness Study Areas, Owyhee County, Idaho. *U.S. Geological Survey Bulletin 1720-A*, 12 p.
- U.S. Bureau of Land Management, 1985, Energy and mineral resource assessment. BLM Manual 3031.

ATTACHMENT A

Mineral Potential Classification System adopted from BLM Manual 3031

I. Level of Potential

- O. The geologic environment, the inferred geologic processes, and the lack of mineral occurrences do not indicate potential for accumulation of mineral resources.
- L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.
- M. The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate potential for accumulation of mineral resources.
- H. The geologic environment, the inferred geologic processes, and the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines and deposits" do not have to be within the area that is being classified, but have to be within the same type of geologic environment.
- ND. Mineral (s) potential not determined due to lack of useful data. This notation does not require a level-of-certainty qualifier.

II. Level of Certainty

- A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.
- B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.
- C. The available data provide direct evidence but are quantitatively minimal to support or refute the possible existence of mineral resources.
- D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

APPENDIX E
FLOODPLAINS/WETLANDS REPORT

Enhanced Training in Idaho Floodplains/Wetlands

Floodplains & Wetlands

I. INTRODUCTION

A portion of this report discussing floodplains was prepared in accordance with Section 204(1) of the Federal Land Policy and Management Act of October, 1976. This report provides an analysis of the known floodplains as required by 43 CFR 2310.3-2(4). The following presents the results of the research regarding the floodplains within lands to be withdrawn in association with the Enhanced Training in Idaho (ETI) project.

The wetlands portion of this report was prepared in accordance with the federal framework for regulating wetlands under the Clean Water Act and the legal definitions of wetlands and "waters of the U.S." In brief, "waters of the U.S." are regulated under the Clean Water Act and include waterbodies such as lakes and ponds and unvegetated streambeds, as well as vegetated wetlands. Unvegetated streambeds are regulated as "waters of the U.S." in so far as the areas are subject to inundation by the ordinary high waters. Wetlands are identified and delineated using the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (USACE 1987). This method defines wetlands as areas with the following attributes: hydrophytic vegetation, hydric soil, and substrate periodically saturated or inundated by water. Sites that display characteristics of all three wetland parameters are considered wetlands. Locations of sample plots and wetland determination can be found for each of the three training range alternatives in section 3.8.

II. DESCRIPTION OF THE PROPOSED ACTION

The Air Force identified three alternatives to provide enhanced training for its 366th Wing located in Mountain Home, Idaho. Each alternative consists of a 12,000-acre tactical training range, five no-drop targets, and 30 emitter sites. Ten of the emitter sites are one-acre sites, and the remaining 20 sites are one-quarter-acre sites. Alternatives vary only in the location of the 12,000-acre training range and the location of the four five-acre no-drop target areas. The 640-acre target area and 30 emitter sites remain the same among alternatives.

For each alternative, the Air Force proposes to withdraw only federally held lands. This refers to most of the land within the proposed 12,000-acre training ranges, the 640-acre no-drop target, three or four five-acre targets (depending on the alternative), and nine one-acre emitter sites. One of the selected five-acre target areas and one one-acre emitter site are located on state lands and thus would not be withdrawn. Alternatives B and C would include the state-owned five-acre target area and therefore, these alternatives would involve the withdrawal of only three five-acre no-drop target areas. Alternative D would involve the withdrawal of four federally-owned five-acre no-drop target areas. Each of the remaining 20 emitter sites consists of one-quarter-acre, and the Air Force proposes to enter into land use agreements with the appropriate land holder or manager (State of Idaho or Bureau of Land Management [BLM]) rather than withdraw such small parcels of land.

The ETI Environmental Impact Statement (EIS) analyzes four alternatives, including the No-Action alternative, referred to as Alternative A. The proposed withdrawals for Alternatives B, C, and D are described here and listed in Table E-1. For Alternative B, the Air Force proposes to withdraw about 11,864 acres of public land for military use. This consists of over 11,200 acres within the proposed training range, the 640-acre no-drop target area, three five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. The Department of Defense (DoD) would instead enter into lease agreements for use of state lands.

For Alternative C, the Air Force proposes to withdraw about 9,264 acres of public land for military use. Like Alternative B, this consists mostly of land within the proposed training range and also includes the 640-acre no-drop target, three five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. DoD would instead enter into lease agreements for use of state lands.

Alternative D would involve withdrawal of about 11,269 acres of public land. Again, most of this land lies within the proposed training range; it also includes the 640-acre no-drop target, four five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. DoD would instead enter into lease agreements for use of state lands.

Table E-1. Approximate Acreages of Withdrawals for Each Alternative

Project Element	Alternative B	Alternative C	Alternative D
12,000-Acre Training Range	11,200	8,600	10,600
640-Acre Target Area	640	640	640
5-Acre Target Areas	15	15	20
1.0-Acre Emitter Sites	9	9	9
Total	11,864	9,264	11,269

III. EXISTING CONDITIONS

Floodplains

Floods are a natural and inevitable event along most rivers. For the Region of Influence (ROI) Two area, some floods are seasonal, such as those that occur when spring rains and melting snow fill river channels. Other floods such as flash floods are sudden, they usually are the result of torrential rain or cloudbursts.

Many streams within the state have been studied by the Federal Emergency Management Agency (FEMA) for flood insurance purposes in the Flood Insurance Study (FIS) (FEMA 1989). Currently, data is not available from the FIS for Owyhee County. However, FEMA notes that runoff from all the streams in the Owyhee County is moderate, with appreciable flows occurring mostly during and immediately after precipitation. During large storms, streamflow increases rapidly, and floodwaters can contain high amounts of sediments and debris, causing occasional flood damage (FEMA 1989).

The principal concern with flooding is the potential for injury and loss of life, and property damage caused by major floods (i.e., those having an average recurrence interval of 25 to 100 years [Merritt 1983]). Floodplain management is a land use technique designed to avoid flood damage by restricting new development and construction in areas subject to flooding. This is accomplished through zoning restrictions on the area subject to flooding, typically defined as the 100-year floodplain. Land use activities in the floodprone area are restricted to those that would not suffer extensive damage from flooding.

The frequency and duration of flooding and the size of the area inundated depend on the natural features of a watershed. A drainage basin area subject to inundation may be identified on the basis of such geomorphic features as levees, cut banks, terraces and scarps. The data required to map the floodplains comes from historical rainfall records and visual geomorphic features on U.S. Geological Survey (USGS) topographic and relief maps. Section 3.6 of the ETI EIS illustrates the probable extent of the areas subject to inundation from floods.

With respect to flood hazards, streams throughout the Bruneau River basin are subject to occasional, temporary flooding. These floods are caused by snowmelt in the surrounding mountains, high-intensity thunderstorms, or a combination of the two. Snowmelt is the main cause of floods on stream at high altitudes, while localized thunderstorms are the primary flood producers on streams below 6,000 feet (Riggs 1976). While these floods increase streambank erosion and downstream sediment load, they do not pose significant hazard to human health because there are no residences located within the flood-prone areas in ROI Two.

IV. EFFECTS OF FLOODING ON THE PROPOSED ACTION

The proposed ETI project would not result in the construction and operation of facilities within the floodplain area as graphically illustrated in section 3.6 of the ETI EIS; therefore, impacts due to flood events would not occur.

Wetlands

I. METHODOLOGY

The Grasmere site was surveyed for wetlands between June 11-13, 1996. The Clover Butte site was surveyed on July 8, 1996. The Juniper Butte site was surveyed on October 9 and 10, 1996.

Descriptions of vegetation included species lists and estimates of cover. Species were also classified by their adaptation to wetland conditions following Reed (1987) (Table E-2). Wetland communities were classified using the U.S. Fish and Wildlife Service (USFWS) system (Cowardin et al. 1979). This is a hierarchical classification scheme that includes a categorization at the system, class, and subclass levels with modifiers to describe wetlands. It uses a multi-faceted approach that incorporates a combination of features including topography, substrate, water regime, and vegetation. Wetland descriptions are summarized in section 3.8.2 of the EIS for the wetland types that occur in the study area.

[illegible]

Table E-2. Plant Species Found at Wetland Sites Within ROI One (Continued)

Scientific Name	Common Name	WIS*	Plot Location and Numbers																							
			Grasmere																Clover Butte			Juniper Butte				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	1	2	3		
FORBS continued:																										
<i>Juncus nevadensis</i>	Sierra rush	FACW				X				X																
<i>Lactuca serriola</i>	Prickly lettuce	FAC-																								
<i>Lepidium perfoliatum</i>	Common clasp-leaf peppergrass	FACU+																								
<i>Minulus breviflorus</i>	Short-flower monkeyflower	FACW				X																				
<i>Minulus guttatus</i>	Common large monkeyflower	OBL												X												
<i>Montia chianissoi</i>	Chamisso's miner's lettuce	OBL			X					X			X	X		X								X		
<i>Montia dichotoma</i>	Dwarf miner's lettuce	FAC	X	X					X																	
<i>Montia fontana</i>	Fountain miner's lettuce	OBL							X				X													
<i>Nasturtium officinale</i>	True watercress	OBL				X			X																	
<i>Poa palustris</i>	Fowl bluegrass	FAC				X				X	X			X												
<i>Poa pratensis</i>	Kentucky bluegrass	FACU+	X											X		X										
<i>Polygonum aviculare</i>	Prostrate knotweed	FACU-																								
<i>Psilocarpus oregonus</i>	Oregon woolly-heads	FACW																X	X							
<i>Rumex acetosella</i>	Sheep sorrel	FACU																								
<i>Rumex sp.</i>	Dock	FACW/U			X		X						X		X	X								X		
<i>Senecio triangularis</i>	Arrow-leaf groundsel	FACW+					X																			
<i>Sisymbrium altissimum</i>	Tumble mustard	FACU-																			X					
<i>Spergula arvensis</i>	Stickwort	NI		X																						
<i>Trifolium sp.</i>	Clover	NI	X						X																	

*Key to Wetland Indicator Status (WIS)

Category	Symbol	Definition
Obligate Wetland Plants	OBL	Plants that almost always (>99% of the time) occur in wetlands but which may rarely (<1% of the time) occur in non-wetlands.
Facultative Wetland Plants	FACW	Plants that often (67 - 99% of the time) occur in wetlands, but sometimes (1 - 33% of the time) occur in non-wetlands.
Facultative Plants	FAC	Plants with a similar likelihood (33 - 67% of the time) of occurring in both wetlands and non-wetlands.
Facultative Upland Plants	FACU	Plants that occur sometimes (1 - 33% of the time) in wetlands, but occur more often (67 - 99% of the time) in non-wetlands.
Obligate Upland Plants	UPL	Plants that rarely (<1% of the time) occur in wetlands, but almost always (>99% of the time) occur in non-wetlands.
No Indicator	NI	Plant species with insufficient information available to determine an indicator status.

Typically, wetland hydrology occurs where the presence of water has an overriding influence on vegetation and soils, resulting in the development of wetland soils and wetland plant communities. Inundation or soil saturation were the most obvious indicators of wetland hydrology. Where saturation was absent, other indications of seasonal flow or flooding were used. Topographic features and indications of scouring were used to infer wetland hydrology for surveys conducted during the dry season (June). In these cases, wetland designation relied more heavily on vegetation and soil properties.

Hydric soils (soils formed under wetland conditions) are a positive indicator of wetland conditions. Soil profiles were examined for hydric indicators to a depth of 18 inches where possible; however, many sites were too rocky to penetrate. When rocky soils prevented the collection of soils data, the wetland designation relied on the vegetation and hydrology properties.

Based on the USFWS System (1979) for describing wetland communities, the National Wetland Inventory (NWI) mapping, USGS maps, and field survey data, an analysis of the project specific components is provided below. The wetlands found within the project area are presented in Table E-3.

II. EXISTING CONDITIONS

Very few wetlands are found within the high desert of Owyhee County. This vast area has a scattering of small wet depressions, a few springs, and occasional canyons and arroyos that contain water for a sufficient period to support wetlands. Because wetlands are so rare, they are a critical resource for the survival of many wildlife species and represent a unique biotic ecosystem for a variety of plant and invertebrate species. They provide breeding, rearing, and feeding grounds, thermal shelter, and hiding cover for many species of animals. Reduction of these wetlands could cause a decrease in the species dependent on them. Wetlands perform physical and chemical functions essential for health of an ecosystem, including surface and subsurface storage of water, microbial processing, and organic carbon export.

Alternative B - Clover Butte Training Range

The proposed 12,000-acre Clover Butte training range is largely a flat plain and gradually sloping butte with only four small depressional areas identified by the NWI as potential wetlands. Two small depressional wetlands are located along the southern boundary of the 12,000-acre training range. These two areas are located approximately 10 feet from an unimproved road. One other excavated livestock pond was located along the southern border, but further to the west. This area was located about 50 feet from an unimproved road. The fourth area should have been located along the western border, but did not exist. None of the wetlands occurred in the area identified as the primary ordnance impact area. Field surveys to delineate wetlands revealed that two of the four sites showed sufficient evidence to indicate wetland vegetation and hydrology. The total area of wetland habitat occurring on the Clover Butte site is approximately 1.2 acres. No permanent streams coincide with the proposed training range, but a few intermittent drainages carry storm water for short periods and may be classified as jurisdictional "waters of the U.S." under Clean Water Act regulations.

Table E-3. Wetland Determinations for Field Sample Plots

Plot No.	Wetland Classification	WETLAND CRITERIA			Atypical Situation	Wetland Determination	Location/Hydrogeomorphic Class
		Vegetation	Soils	Hydrology			
Grasmere							
1	R4SBA	no	yes	yes*	no	U.S. waters	Tributary to Wickahoney Creek/Intermittent Stream
2	R4SBA	no	yes	yes*	no	U.S. waters	Tributary to Wickahoney Creek/Intermittent Stream
3	R4SBA	yes	rocky	yes	no	yes	Tributary to Wickahoney Creek/Intermittent Stream
4	R4SBA	yes	rocky	yes	no	yes	Tributary to Wickahoney Creek/Intermittent Stream
5	PSSA	no	rocky	yes*	no	no	Wickahoney Creek/Perennial Stream
6	PSSA	yes	rocky	yes	no	yes	Wickahoney Creek/Perennial Stream
7	PSSA	yes	rocky	yes	no	U.S. waters	Wickahoney Creek/Perennial Stream
8	PEMA	yes	yes	yes	no	yes	Depressional Wetland/Swale
9	PEMA	yes	yes	yes	no	yes	Depressional Wetland/Swale
10	PEMA	yes	yes	yes	no	yes	Depressional Wetland/Swale
11	PEMA	yes	no	yes	no	no	Depressional Wetland/Swale
12	R4SBA	no	rocky	yes	no	yes	China Creek/Intermittent Stream
13	PEMB	yes	yes	yes	no	yes	Watering Hole above China Creek/Spring
14	PSSB	yes	rocky	yes	no	yes	Watering Hole above China Creek/Spring
15	R4SBC	yes	rocky	yes	no	yes	Wickahoney Creek/Perennial Stream
16	PUSAh	yes	yes	yes	no	yes	Tributary to China Creek/Depression

Table E-3. Wetland Determinations for Field Sample Plots

Plot No.	Wetland Classification	WETLAND CRITERIA			Atypical Situation	Wetland Determination	Location/Hydrogeomorphic Class
		Vegetation	Soils	Hydrology			
Clover Butte							
C-1	PEMAx	yes	no	yes*	yes	yes	Depressional Wetland
C-2	PEMAx	yes	no	yes*	yes	yes	Depressional Wetland
C-3	PUSC _x	no	no	no	yes	no	Depression
Juniper Butte							
J-1	PEMAx	no	yes	yes	yes	no	Depression
J-2	PEMA	yes	no	yes	no	no	Depression
J-3	PUSA _h	yes	no	no	yes	no	Depression

*No hydrology determination was made on the wetland sheet, but plot is in streambed or large depression.

Wetland Classification	Definition
PEMA	Palustrine, Emergent, Temporarily Flooded
PEMB	Palustrine, Emergent, Saturated
PSSA	Palustrine, Scrub-Shrub, Temporarily Flooded
PSSB	Palustrine, Scrub-Shrub, Saturated
PUSA	Palustrine, Unconsolidated Shore, Temporarily Flooded
PUSC	Palustrine, Unconsolidated Shore, Seasonally Flooded
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded

Modifiers Added Following Main code: x=Excavated h=Diked/Impounded

Approximately 25 miles of these unvegetated streambeds of variable width occur within the 12,000-acre Clover Butte area. However, no jurisdictional "waters of the U.S." occur within the primary ordnance impact area.

Vegetation. The two depressions identified as wetlands in the field surveys have been mapped by the NWI and classified as palustrine, emergent, temporarily flooded wetlands. These two wetlands have the additional designation of an excavated wetland. A third and fourth depression identified by the NWI as palustrine, unconsolidated shore was designated as non-wetland habitat during the field survey. The wetland field survey indicated a lack of hydrophytic vegetation at the third depression and no depression was present to correspond to the fourth site. Vegetation within the two depressional wetlands identified was dominated by wetland species; therefore, the vegetation is considered hydrophytic according to the USACE wetland definition.

Vegetation within the two depressional wetlands identified was dominated by wetland species including Oregon woolly-heads (*Psilocarphus oregonus*) and smooth spike primrose (*Boisduvalia glabella*), with scattered silver sagebrush (*Artemisia cana*). Fiddleneck (*Amsinckia* sp.) and meadow foxtail (*Alopecurus pratensis*) were also common wetland plants found within the depressions. More than 50 percent of the dominant species are designated in the *National List of Plant Species that Occur in Wetlands* (Reed 1987); therefore, the vegetation is considered hydrophytic according to the USACE wetland definition.

Hydrology. Soils were not saturated above a level of 18 inches depth at the soil pit sample sites. Hydrology was assessed at the beginning of the summer dry season; saturation or inundation would not be expected in seasonal or ephemeral wetlands at this time. There is a need, therefore, to rely on other indicators of hydrology. The topography at two of the four sites consists of a large depression with a flat bottom that has been carved into the surrounding higher plain. The low-lying and enclosed basin position of these sites in addition to their large size and depth indicates the probable wetland hydrology of these two locations. The third site was a small depression dominated by non-wetland species, and no depression or rivulet was evident at the fourth site. Therefore, only two of the four sites are presumed to have wetland hydrology.

Soils. The U.S. Department of Agriculture (USDA) soil survey maps indicate the soil to be of the Babbington series, Piline association (on the *Hydric Soils List for Idaho*), 0 to 3 percent slopes for the two wetland sites. Soils at the two non-wetland sites have been mapped as Hardtrigger-Snowmore-Vickery Complex, 2 to 15 percent slopes (not found on the *Hydric Soils List for Idaho*).

A pit was dug to determine whether the soils displayed a history of hydric conditions. Results of this field analysis indicate that anaerobic conditions have not been present for sufficient duration to develop hydric soils, i.e., gleyed or low chroma/mottled soils.

Wetland Determination. Although the soils are considered hydric, field testing at the site did not meet hydric soil criteria. However, hydric vegetation and wetland hydrology are present at two of the sites. These depressions would be considered "atypical situations" as defined in the USACE Wetlands Delineation Manual (USACE 1987). Atypical situations occur when positive indicators of one of the criteria could not be found because of recent human activities or natural events. The large uniform depressions on site presumably have been excavated as indicated by the NWI. The hydrology was altered such that hydric conditions now exist for a brief period during the growing

season where they previously did not exist. This was a permanent alteration and now constitutes the "normal circumstances." The hydric soil indicators have not developed because of insufficient time having passed to allow their development. The soils in these two areas are assumed to function as hydric soils (USACE 1987). A determination can be made, therefore, for the presence of wetlands at two of the four sites. The two wetland sites are located along the southern border in the small depressions.

Alternative C - Grasmere

Several wetlands are present in the proposed 12,000-acre Grasmere training range, including intermittent streams, perennial streams, depressional wetlands or swales, and springs. Both palustrine and riverine systems are represented in this area. Wickahoney Creek is a perennial stream that forms a deep rugged canyon that crosses through the eastern portion of the site, flowing northward. Wetlands persist along its length as well as along two tributary canyons to Wickahoney and China Creek, another deep canyon in the southern portion. There are four canyons with wetlands (24.1 acres) and four additional depressional/swale wetlands (6.7 acres) within the 12,000-acre site (30.7 acres total). The Grasmere area has many other intermittent streams that do not support wetlands but may be classified as jurisdictional "waters of the U.S." Approximately 48 miles of these unvegetated streambeds of variable width occur within the Grasmere 12,000-acre alternative. Only 2.4 miles of jurisdictional "waters of the U.S." occur within the primary ordnance impact area.

Vegetation. The wetlands along Wickahoney Creek are classified by NWI as palustrine, scrub-shrub, temporarily flooded wetlands. China Creek and the tributaries to Wickahoney Creek are intermittent streams that include some wetlands. These wetlands are classified as riverine, intermittent streambed, temporarily flooded based on NWI mapping. Several depressional wetlands that are at the head of small intermittent streams or isolated within the surrounding uplands also are present in the Grasmere area. These depressional wetlands are classified as palustrine, emergent, temporarily flooded. Several springs near China Creek contain wetlands and are classified as palustrine, emergent, saturated. Field surveys indicated a dominance of hydrophytic vegetation with a similar composition as that for the intermittent streams.

Field sample plots taken along the wetlands of Wickahoney Creek indicate a dominance of hydrophytic vegetation. The willow scrub riparian vegetation along Wickahoney Creek is dominated by Lemmon's willow (*Salix lemmonii*), Booth's willow (*Salix boothii*), choke cherry (*Prunus virginiana*), and interior rose (*Rosa woodsii*) in the shrub layer with fiddleneck, arrow-leaf groundsel (*Senecio triangularis*), and common large monkeyflower (*Mimulus guttatus*) dominating the herbaceous layer.

Wetlands along intermittent streams include China Creek and the tributaries to Wickahoney Creek. These wetlands are classified as riverine, intermittent streambed, temporarily flooded based on NWI mapping. Field sample plots taken along these creeks indicate a dominance of hydrophytic vegetation. An emergent herbaceous wetland community lines the creek bed and is dominated in various segments by one or more of the following species: Chamisso's miner's lettuce (*Montia chamissoi*), Douglas mugwort (*Artemisia douglasiana*), Kentucky bluegrass (*Poa pratensis*), stickwort (*Spergula arvensis*), and creeping spikerush (*Eleocharis palustris*). There are also some segments of these creeks that do not support wetland vegetation, such as at sample plot 2,

where the streambed is scoured and unvegetated. All other sample plots did support hydrophytic vegetation.

Several depressional wetlands that are at the head of small intermittent streams or isolated within the surrounding uplands are present in the Grasmere area. These depressional wetlands are classified as palustrine, emergent, temporarily flooded. Field sample plots revealed a dominance of hydrophytic vegetation including creeping spikerush, Baltic rush (*Juncus balticus*), Douglas' sedge (*Carex douglasii*), reed meadowgrass (*Glyceria maxima*), and Chamisso's miner's lettuce.

Several springs near China Creek contain wetlands and are classified as palustrine, emergent, saturated. Field surveys indicated a dominance of hydrophytic vegetation with a similar composition as that for the intermittent streams including Chamisso's miner's lettuce, but also fountain miner's lettuce (*Montia fontana*) and Nebraska sedge (*Carex nebrascensis*).

Hydrology. All of the field sample plots were found to display indicators of wetland hydrology, either by direct observation of inundation and saturation or by inference from drainage patterns (Table E-3). The soils at most of the sample plots on Wickahoney Creek, China Creek, and the tributary streams were saturated or inundated. Wickahoney Creek, China Creek, and the upper reaches of the tributary streams were still flowing during the June survey. Sample plots 1, 2, and 5 did not have inundated or saturated soils during the survey; however, they are clearly associated with a drainage pattern and would also meet the wetland hydrology criterion. The springs near China Creek and the depressional wetlands were inundated or saturated during the field survey period. These sites clearly displayed wetland hydrology (Table E-2).

Soils. None of the soil types mapped by the USDA soil survey in the Grasmere area are on the *Hydric Soils List for Idaho*. Soil sampling at almost all of the wetland field plots, however, revealed the presence of hydric soils. The soil type mapped for the upper reaches of Wickahoney Creek, China Creek, and a tributary to Wickahoney is Rubbleland-Rock Outcrop-Pachic Argixerolls, very steep. The lower reaches of these streams are mapped as Goose Creek Loam, 1 to 3 percent slopes and Bruncan-Hardtrigger-Buncelvoir Complex, 1 to 8 percent slopes. The depressional wetlands occur on the Northcastle-Bluecreek-Yatahoney Loams, 1 to 10 percent slopes. Therefore, most of the soil samples collected were either gleyed or had a low chroma (1) and displayed a history of hydric conditions (Table E-2). One of the sample plots (#11) at a depressional wetland had a slightly higher chroma (2) and, therefore, was determined to be a non-hydric soil. Half of the wetland plots had soils too rocky to dig a soil pit to investigate the soil characteristics. For these plots lacking complete data, a conservative wetland determination was made on the basis of vegetation and hydrology alone.

Wetland Determination. Out of the 16 wetland plots sampled, 13 were determined to be wetlands using the USACE wetland delineation method (Table E-2). One reach of an intermittent stream (plot 2) did not support more than 50 percent wetland species. This segment has a clearly defined unvegetated channel which is not wetland but would be regulated as a "waters of the U.S." Another site along the margin of Wickahoney Creek (plot 5) also did not have over 50 percent wetland species, although it was characterized by a willow riparian scrub. The third site that did not meet all three wetland criteria is a wet depression (plot 11) that did not have hydric soils, although it had a predominance of wetland plants.

Alternative D - Juniper Butte

The Juniper Butte proposed target area comprises the northern slope of a large butte and includes a canyon, Juniper Draw, which dissects the eastern portion of the site. Juniper Draw is designated as a intermittent stream by the USGS; in addition, numerous intermittent streams drain the north slope of the butte. Only four small wetlands are mapped in the Juniper Butte area by the NWI. Through field investigation, however, none of these four potential wetlands were found to support all three criteria for federal definition as wetlands. Therefore, no wetlands under federal jurisdiction were found to occur on the Juniper Butte site. The intermittent drainages that carry storm water for short periods may be classified as jurisdictional "waters of the U.S." under Clean Water Act regulations. Approximately 63 miles of these unvegetated streambeds of variable width occur within the Juniper Butte 12,000-acre alternative. Only 2.4 miles of jurisdictional "waters of the U.S." occur within the primary ordnance impact area.

The NWI mapping indicates two small potential wetland areas along the perennial stream, Juniper Draw. These riparian sites were found to fall outside federal jurisdiction as described above. These sites are classified by NWI as palustrine, emergent and scrub-shrub, temporarily flooded. The soils at these sites are classified as Haw-Renslow Association, 0 to 4 percent slopes and the Alzola-Troughs-Bigflat Stony Loams, 5 to 35 percent slopes.

Two small depressions, located in the northeastern portion of the proposed training range, are mapped by NWI, but were found to fall outside federal jurisdiction as described above. One site is on the flat surface of a small butte, it is adjacent to a jeep trail, and has been excavated. This area is classified as palustrine, emergent, temporarily flooded. It overlies soils from the Hardtrigger-Snowmore-Vickery Complex, 1 to 5 percent slopes. The other site is impounded within an intermittent stream and is classified as palustrine, unconsolidated shore, temporarily flooded.

No-Drop Target Areas

The no-drop target areas are scattered throughout the project area and have purposefully been located to avoid wetlands. The 640-acre no drop target near Broken Wagon Flat has no wetlands and no intermittent streams or "waters of the U.S." Only the five-acre no-drop sites ND-5, ND-4, and ND-8 have wetlands within a 1-mile radius (Table E-3).

China Creek occurs within approximately 1,500 feet of the ND-4 site. Wetlands here are riverine, intermittent streambed, temporarily flooded. Also occurring in the vicinity are depressional wetlands classified as palustrine, emergent, saturated and palustrine, scrub-shrub, saturated.

Emitter Sites

These one-acre and one-quarter-acre sites would be developed with gravel pads and emitters. As noted for the simulated target areas, the locations of the proposed emitters also have been chosen to avoid impacting wetlands. The NWI maps produced by the USFWS were reviewed to analyze the proximity of wetlands to the emitter sites. Fourteen of the emitter sites are within one mile of wetlands mapped by the NWI (Table E-3). Most of the wetlands lie within 1,000 to 3,000 feet of the emitters. The types of wetlands mapped in the vicinity of emitters include those from the palustrine and riverine systems with one lacustrine wetland, i.e., Blackstone Reservoir.

Roads

New roads to access various facilities such as emitter sites and drop zones are proposed to be constructed throughout the project area. Any existing roads would also be used. Some of the existing roads could be used as is, whereas others must be upgraded. The new roads to be constructed would coincide with intermittent streams in approximately six to eight locations. Existing roads that would be upgraded would coincide with intermittent streams in approximately 50 locations and a perennial stream in one location. At least one of the crossings of intermittent streams would involve wetlands and potentially more that are outside the areas surveyed for wetlands. The perennial stream crossing also is likely to involve wetlands. The existing roads that would not be upgraded coincide with intermittent streams in approximately 93 locations. The proposed bridge reconstruction at Clover Creek would require review and approval by the USACE for the Section 404 permitting process under the Clean Water Act. Construction activities would take place after consultation with resource management agencies and when potential impacts would be lowest.

Saylor Creek Range

A detailed study of Saylor Creek Range found no jurisdictional wetland areas located on the range. Other types of wetlands located on the range include intermittent riverine, palustrine emergent, and palustrine unconsolidated shore. None contained water year-round. The riverine wetlands temporarily and intermittently flood. The palustrine wetlands are also temporarily and seasonally flooded. Wetlands at the range are generally confined to intermittent streams, small playas, and impoundments. However, these wetland areas did not meet criteria for jurisdictional wetlands.

III. EFFECTS OF THE PROPOSED ACTION ON WETLANDS

If implemented, the proposed project would affect wetlands. The impact acreage would depend on the alternative chosen. There would be no impacts with the No-Action Alternative. The 12,000-acre training ranges would indirectly impact while roads would be the only project features with direct wetland impacts. There would be no direct wetland impacts to no-drop targets or emitter sites in any of the alternatives; therefore, only the wetland impacts associated with the training ranges and roads are presented below.

Alternative B - Clover Butte

Two small depressional wetlands (1.2 acres) occur within the Clover Butte training range. However, these wetlands are located near the periphery of the range. No wetlands are present in the 300-acre primary ordnance impact area. The probability of direct impacts to wetland vegetation from ordnance is low, given the small area of wetland within the larger 12,000-acre site. There is, however, a potential for direct impacts to a portion of the 25 miles of jurisdictional "waters of the U.S." Direct impacts to these intermittent streams are likely to be minor.

There is a potential for the two wetlands and the "waters of the U.S." onsite to be indirectly impacted from increased frequency of fires, erosion and sedimentation, fuel spills, off-road vehicle

use, and fugitive dust. The chance of erosion and downstream sediment transport on disturbed or burned areas is minimal on this site, given the generally flat or gently sloping topography.

Many concerns were expressed in public and agency comments on the DEIS regarding the possibility of range fires or disruption to ranching operations from increased human presence. In response to these concerns, the Air Force proposes to develop a less than one-acre above-ground reservoir within a corner of the 12,000-acre training range for Clover Butte. This less than one-acre above-ground reservoir would be linked to existing pipelines and be available for ranching operations. At all times, the proposed reservoir would have 50,000 gallons of water reserved to support fire suppression. Although within the proposed withdrawal area, the water from the joint-use reservoir would be accessible from both outside and inside the perimeter fence. Construction activities would take place after consultation with the USACE, resource management agencies, and when potential impacts would be lowest.

Alternative C - Grasmere

Several depressional wetlands, riparian streams, and springs (30.7 acres) occur within the Grasmere training range. These wetlands are located throughout the training range but occur only outside of the 300-acre primary ordnance impact area. The probability of a low level of direct impacts to wetland vegetation from ordnance over time is relatively high, given the placement of wetlands in close proximity to the primary ordnance area. There is also a potential for direct impacts to a portion of the 48 miles of jurisdictional "waters of the U.S." Direct impacts to these intermittent streams are likely to be minor.

There is a potential for the wetlands and the "waters of the U.S." onsite to be indirectly impacted from increased frequency of fires, erosion and sedimentation, fuel spills, off-road vehicle use, and fugitive dust. The chance of erosion and downstream sediment transport on disturbed or burned areas is relatively high on this site, given the steep topography and location of some wetlands near the 300-acre primary ordnance impact area.

The proposed less than one-acre above-ground reservoir for Alternative B or D is not required since alternate sources of water are available at the Grasmere alternative.

Alternative D - Juniper Butte

No jurisdictional wetlands occur within the Juniper Butte training range. Numerous intermittent streams (i.e., jurisdictional "waters of the U.S.") occur within the Juniper Butte training range. Approximately 2.4 miles of jurisdictional "waters of the U.S." in the primary ordnance impact area would be directly impacted under this alternative. There is also a potential for direct impacts to a portion of the other 62 miles of jurisdictional "waters of the U.S." in the 12,000-acre training range.

The chance of erosion and downstream sediment transport on disturbed or burned areas is minimal on this site, given the generally flat or gently sloping topography.

Many concerns were expressed in public and agency comments on the DEIS regarding the possibility of range fires or disruption to ranching operations from increased human presence. In response to these concerns, the Air Force proposes to develop a less than one-acre above-ground

reservoir within a corner of the 12,000-acre training range for Juniper Butte. This less than one-acre above-ground reservoir would be linked to existing pipelines and be available for ranching operations. At all times, the proposed reservoir would have 50,000 gallons of water reserved to support fire suppression. Although within the proposed withdrawal area, the water from the joint-use reservoir would be accessible from both outside and inside the perimeter fence. Construction activities would take place after consultation with the USACE, resource management agencies, and when potential impacts would be lowest.

Roads

There would be some direct wetland impacts associated with roads for all project alternatives except the no-action alternative. All new roads associated with this project would be unpaved gravel roads. Some of the existing roads would be used as is, while others must be upgraded. The existing roads to be upgraded could have direct impacts on "waters of the U.S." or wetlands.

New roads to be constructed would impact intermittent streams in approximately six to eight locations. Clover Butte and Grasmere would each impact six intermittent streams with new road crossings, while Juniper Butte would impact eight intermittent streams with new road crossings. Existing roads to be upgraded could have minor impacts to intermittent streams in approximately 50 locations and a perennial stream in one location. The perennial stream crossing of the upgraded road is likely to impact wetlands. The existing roads that would not be upgraded coincide with intermittent streams in approximately 93 locations.

APPENDIX F
WATER RIGHTS CLAIMS

Water Rights Claims

INTRODUCTION

Appendix F provides a complete listing of the claims to water rights considered in the ETI environmental impact analysis. The claims to water rights listed in this appendix are all located within approximately one square mile of the indicated emitter or no-drop target or are within the boundaries of the indicated alternative. The claims listed in this appendix are subject to the ongoing Snake River Adjudication Process, and although an attempt has been made to provide the most recent data available, the information provided here is subject to change until the area in question has been completely adjudicated. The area in question is covered by Idaho Department of Water Resources (IDWR) Basins 51 and 55. A Directors Report from IDWR on livestock claims for this area will be available on approximately June 16, 1997. Uncontested livestock claims will be partially decreed on approximately December 15, 1997. Contested livestock claims and other types of claims will be decreed at a later date.

Appendix F Claims to Water Rights Considered in the Impact Analysis					
<i>Right</i>	<i>Source</i>	<i>Claimant</i>	<i>Use*</i>	<i>Project Element</i>	
A51-02356	Groundwater	BLM	4, 8	AD, BC, Alternatives B and D	
A51-02440	E.F. Bruneau River	BLM	4, 8	AC, AH	
A51-04072B	Groundwater	BLM	4, 8	AA	
A51-07171	Crawfish Spring	BLM	4, 6, 8, 10	Alternative D	
A51-07276	Groundwater	BLM	4	BB	
A51-07291	Wickahoney Spring	State of Idaho	4	AT	
A51-07292	Bruneau River, East Fork	BLM	4, 6, 8, 10	AC, AH, AI	
A51-10141	Spring	Private	4	Alternative C	
A51-10146	Wickahoney Creek	Private	4	Alternative C	
A51-10148	Spring	Private	4, 5, 6	Alternative C	
A51-10643	Unnamed Stream	BLM	4, 8	Alternative C	
A51-10732	Louse Creek	BLM	4, 8	AM	
A51-10810	Sheep Creek	BLM	4, 8	AM	
A51-10821	Unnamed Stream	BLM	4, 8	Alternative C	
A51-10826	Wickahoney Creek	BLM	4, 8	Alternative C	
A51-10827	Wickahoney Creek	BLM	4, 8	Alternative C	
A51-10918	Spring	BLM	4, 8	Alternative C	
A51-10930	Spring	BLM	4, 8	Alternative C	

Appendix F
Claims to Water Rights Considered in the Impact Analysis

<i>Right</i>	<i>Source</i>	<i>Claimant</i>	<i>Use*</i>	<i>Project Element</i>
A51-10933	Spring	BLM	4, 8	Alternative C
A51-10936	Sugar Creek	BLM	4, 8	AN
A51-11105	Unnamed Stream	BLM	5, 6, 9, 10	Alternative C
A51-11106	Wickahoney Creek	BLM	5, 6, 9, 10	Alternative C
A51-12079	Clover Creek	BLM	4, 8	Alternative D
A51-12091	Unnamed Pond	BLM	4, 5, 6, 7, 8, 9, 10	Alternative B
A51-12092	Unnamed Pond	BLM	4, 5, 6, 7, 8, 9, 10	Alternative B
A51-12436	Unnamed Stream	BLM	4, 8	BE
A51-12485	Unnamed Stream (Juniper Draw)	BLM	4, 8	Alternative D
A51-12711	Jim Bob Creek	BLM	4, 8	AD, AE, ND-6, Alternatives B and D
A51-12738	Unnamed Stream	BLM	5, 6, 9, 10	AO
A51-12741	Wickahoney Creek	Private	4	Alternative C

Note: * Use Codes:

- 1 Irrigation
- 2 Irrigation Storage
- 3 Irrigation from Storage
- 4 Stockwater
- 5 Stockwater Storage
- 6 Stockwater from Storage
- 7 Domestic
- 8 Wildlife
- 9 Wildlife Storage
- 10 Wildlife from Storage

APPENDIX G
LAND USE REPORT

Enhanced Training in Idaho Land Use

I. INTRODUCTION

This report was prepared in accordance with 43 CFR § 2310.3-2 (b)(1) which states that, for land withdrawals, a report summarizing land use and the effects of the proposed action on these uses be submitted. In accordance with this regulation, this report identifies present users of the lands, explains how they would be affected by the proposed use, and analyzes the manner in which existing and potential uses are incompatible with or conflict with the proposed uses. This report also discusses the provisions that would be made for the effects on existing uses that could result in continuation, modification, or termination of those uses.

In addition, in accordance with 43 CFR § 2310.3-2 (b)(3)(ii), this report also identifies the proximity of the proposed action to land featuring wilderness characteristics and establishes that the proposed withdrawal does not include any lands featuring wilderness characteristics.

II. DESCRIPTION OF THE PROPOSED ACTION

The Air Force identified three alternatives to provide enhanced training for its 366th Wing located in Mountain Home, Idaho. Each alternative consists of a tactical training range (approximately 12,000 acres in size), a 640-acre no-drop target area, four five-acre no-drop target areas, and 30 emitter sites. Ten of the selected emitter sites would be one-acre sites and the remaining 20 would be one-quarter-acre sites. Alternatives vary in the location of the 12,000-acre training range, and the four five-acre no-drop target areas. The 640-acre no-drop target area and the 30 emitter sites remain the same among alternatives. The proposed withdrawals for Alternatives B, C, and D are described here and listed in Table G-1.

For each alternative, the Air Force proposes to withdraw federally held lands, including most of the land within the proposed 12,000-acre training ranges, the entire 640-acre no-drop target area, three or four five-acre no-drop target areas (depending on the alternative), and nine one-acre emitter sites. One of the selected five-acre no-drop target areas is located on state school endowment land and would be leased from the State of Idaho. Alternatives B and C would include one five-acre no-drop target area located on state school endowment lands, and would thus involve the withdrawal of only three five-acre no-drop target areas. Alternative D would involve the withdrawal of four federally-owned five-acre no-drop target areas.

One of the one-acre emitter sites is located on state school endowment land. For use of this emitter site, the Air Force proposes to enter into a lease agreement with the State of Idaho. The Air Force proposes to obtain Bureau of Land Management (BLM) rights-of-way for use of the remaining 20 one-quarter-acre sites, rather than withdraw such small parcels of land.

Table G-1. Approximate Acreages of Withdrawals for Each Alternative

Project Element	Alternative B	Alternative C	Alternative D
12,000-Acre Training Range	11,200	8,600	10,600
640-Acre No-drop target area	640	640	640
5-Acre No-drop target areas	15	15	20
1.0-Acre Emitter Sites	9	9	9
Total	11,864	9,264	11,269

III. EXISTING CONDITIONS

Land Ownership

All of the lands included in the proposed withdrawal are federally held lands managed by BLM. The remaining lands include both state lands and federal lands managed by BLM. No private lands would be included in the proposed action.

Land Use

Land in the region is predominantly managed for multiple use. The primary use, livestock grazing, is authorized within large areas called allotments. Lands potentially withdrawn for a training range occur upon these allotments. Refer to section 3.10 of the Enhanced Training in Idaho (ETI) environmental impact statement (EIS) for a detailed description of existing land use conditions in the region.

Because the lands proposed for withdrawal are public lands, they are available for recreational purposes, although no developed recreational facilities are located in these lands. Recreational activities on these lands generally consist of hunting and possibly camping. Refer to section 3.11 of the ETI EIS for a detailed description of recreational use of these lands.

IV. EFFECTS OF PROPOSED ACTION ON LAND USE

Grazing would continue in most of the withdrawn lands with some exceptions and restrictions. Existing BLM grazing permits for the 12,000-acre training range would be terminated; however, grazing would continue. The Air Force would manage grazing on the withdrawn lands under leases at levels compatible with military training activities. Grazing would be permitted within the 12,000-acre training range (outside of the fenced 300-acre primary ordnance impact area). Grazing also would be permitted on the 640-acre no-drop target site. The five-acre no-drop target sites and the nine one-acre emitter sites would be fenced to prevent vandalism, so grazing would no longer be available in these areas. Although the one-quarter-acre emitter sites would not be fenced, they would be graveled and no longer produce livestock forage. In all, a total of about 329 acres of the withdrawn lands would no longer be available for grazing (Table G-2).

**Table G-2. Approximate Acreages of Withdrawn Lands
Where Grazing Would be Unavailable**

Project Element	Acreage
12,000-Acre Training Range	300
640-Acre No-drop target area	0
Four 5-Acre No-drop target areas	20 (15) ¹
Nine ¹ 1.0-Acre Emitter Sites	9
Total	329 (324)

Notes: 1. Numbers in parentheses indicate acreages for Alternatives B and C where only three 5-acre target areas would be withdrawn.

The training ranges were designed to ensure that all ordnance would remain within the fenced range boundaries. For safety purposes, however, general recreationists and other users would be prohibited from accessing the entire 12,000-acre range, the no-drop target sites, and the one-acre emitter sites, which would all be fenced. When in use, personnel would be present at the one-quarter-acre emitter sites; at all other times recreationists would be allowed access. In all, a total of about 12,669 acres of withdrawn lands would no longer be available for recreational activities (Table G-3).

Table G-3. Approximate Acreages of Lands Unavailable for Public Use

Project Element	Acreage
12,000-Acre Training Range	12,000
640-Acre No-drop Target Area	640
Four 5-Acre No-drop Target Areas	20 (15) ¹
Nine 1.0-Acre Emitter Sites	9
Total	12,669 (12,664)

Notes: 1. Numbers in parentheses indicate acreages for Alternatives B and C where only three 5-acre target areas would be withdrawn.

As part of the land withdrawal application, the Department of Defense (DoD) would prepare a resource management plan with the participation and guidance of BLM. This would describe the environmental conditions associated with the affected lands and prescribe management objectives.

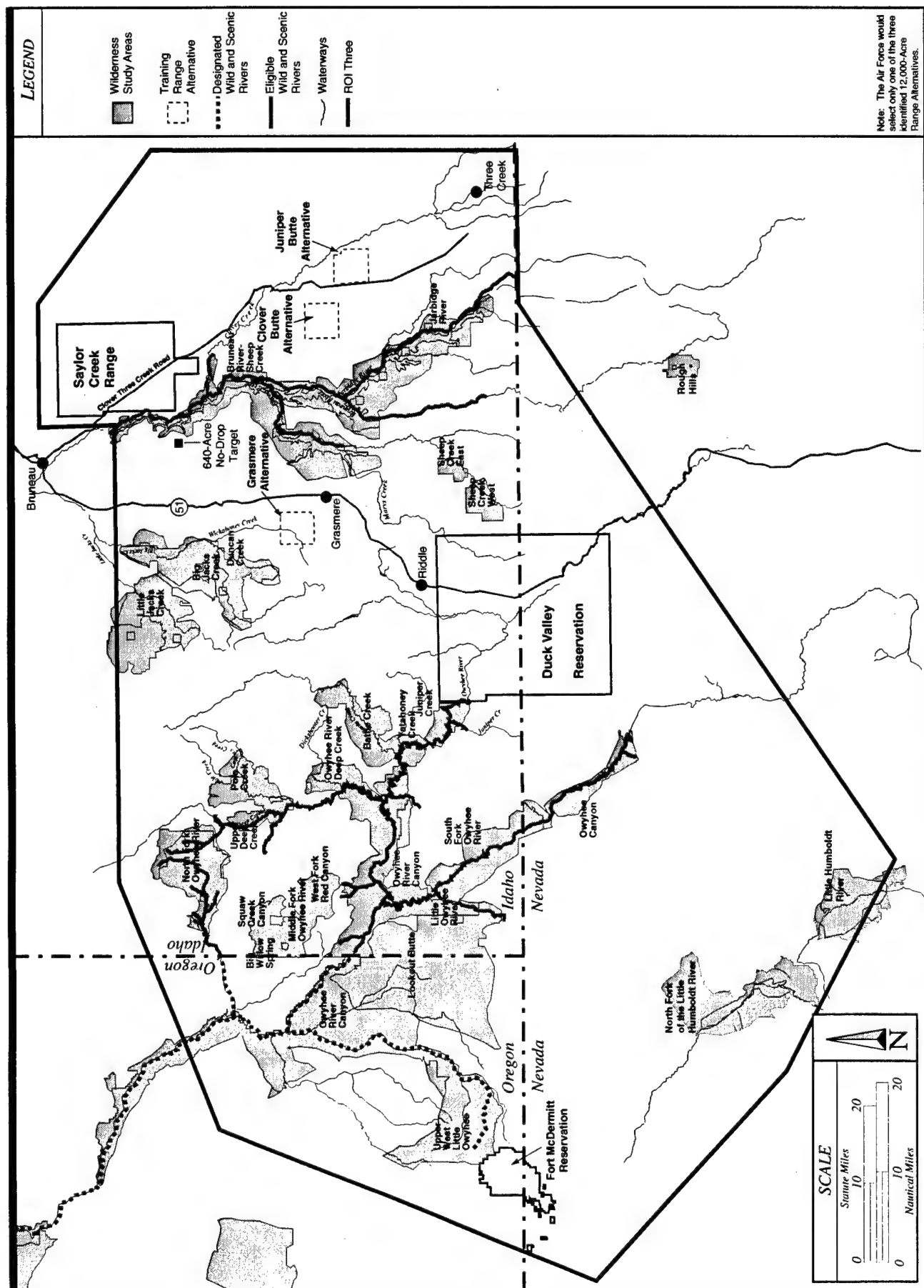
Coordination With Existing Uses

Although BLM would terminate existing permits for grazing within the selected 12,000-acre training range, the Air Force would continue to allow grazing of these lands, at levels compatible with military purposes. Grazing would be discontinued in only the small confined areas discussed above. Grazing would be conducted in conformance with a plan that would be compatible with the schedule and intensity of grazing activities occurring on the public lands beyond the limits of the range; compensation in kind would be provided by the Air Force, if necessary, for any loss of grazing use. This is further described in Chapter 2 of the ETI EIS and outlined in Appendix M.

Although general public access to the sites would not be permitted, these sites make up only a very small percentage of the available public lands in the region, and impacts should be minimal (refer to sections 3.11 and 4.11 of the ETI EIS for a full discussion of the recreation resource). Various road improvements associated with the alternatives would improve travel for the public in some locations (refer to section 2.3.2.4 and section 4.10 of the ETI EIS for a full description of road improvements and impacts on roads). No major travel routes would be affected by the proposed action.

V. WILDERNESS CHARACTERISTICS

In accordance with 43 CFR § 2310.3-2 (b)(3)(ii), the areas proposed for withdrawal have been reviewed to identify any lands potentially eligible of wilderness designation. In the State of Idaho, all public lands were evaluated by BLM (with public participation) to determine the areas possessing wilderness characteristics. Wilderness study areas (WSAs) were delineated, and recommendations on their suitability for wilderness designation were submitted in 1991 through the President of the United States to Congress for consideration. None of the areas proposed for withdrawal are within identified WSAs. Figure G-1 shows the location of WSAs in relation to the lands associated with the proposed action.



APPENDIX H
ECONOMIC IMPACT REPORT

Enhanced Training in Idaho Socioeconomics

I. INTRODUCTION

This report was prepared in accordance with 43 CFR § 23103-2 (b)(3)(v) which states that, for land withdrawals, an analysis of the proposed uses and changes in use associated with the proposed action be submitted. In accordance with this regulation, this report identifies present socioeconomic conditions in the region and explains the potential effects of the proposed action on the region's socioeconomic resources.

This report presents the following:

- A brief description of the proposal to enhance Air Force training in Idaho.
- A description of the existing Owyhee County economic conditions, with a special emphasis on ranching.
- A presentation of quantifiable economic effects resulting from withdrawal of 12,000 acres of grazing land to a ranching operation.
- An analysis of the quantifiable results to local public finances associated with a 12,000 acre withdrawal of land from the public domain.
- An analysis of regional quantifiable economic consequences associated with Enhanced Training in Idaho (ETI) and continued grazing on 11,000 acres of the withdrawn 12,000 acres. This results in a net reduction of 1,000 acres of grazing land in Owyhee County.

II. DESCRIPTION OF THE PROPOSED ACTION

The ETI Environmental Impact Statement (EIS) analyzes four alternatives, including the No-Action alternative, referred to as Alternative A. The Air Force identified three alternatives to provide enhanced training for its 366th Wing located at Mountain Home Air Force Base (AFB), Idaho. The three alternative sites evaluated in the EIS are Alternative B, Clover Butte; Alternative C, Grasmere; and Alternative D, Juniper Butte. Each alternative consists of a 12,000-acre tactical training range, one 640-acre and four five-acre no-drop target areas, and 30 emitter sites. Ten of the emitter sites are one-acre sites, and the remaining 20 sites are one-quarter-acre sites. Alternatives vary in the location of the 12,000-acre training range and the location of the four five-acre no-drop target areas.

For each alternative, the Air Force proposes to withdraw federally held lands from public use. Most of the land within the proposed 12,000-acre training ranges, the 640-acre no-drop target area, three or four five-acre no-drop targets (depending on the alternative), and nine one-acre emitter sites are federal land. One of the five-acre no-drop target areas, one one-acre emitter site, and parts of each 12,000-acre training range are located on state lands and thus would be leased. Alternatives B and C would include the state-owned five-acre no-drop target area and,

therefore, these alternatives would involve the withdrawal of only three five-acre no-drop target areas. Alternative D would involve the withdrawal of four federally-owned five-acre no-drop targets. Each of the remaining 20 emitter sites consists of one-quarter-acre, and the Air Force proposes to enter into land use agreements with the appropriate land holder or manager (State of Idaho or Bureau of Land Management [BLM]) rather than withdraw such small parcels of land.

The potential land withdrawals for Alternatives B, C, and D are as follows. For Alternative B, the Air Force proposes to withdraw about 11,864 acres of public land for military use. This consists of over 11,200 acres within the proposed training range, the 640-acre no-drop target area, three five-acre no-drop target areas, and nine emitter sites. The remaining lands are state-owned lands, and would not be withdrawn. The Department of Defense (DoD) would instead enter into lease agreements for use of state lands.

For Alternative C, the Air Force proposes to withdraw about 9,264 acres of public land for military use. This alternative consists of land within the proposed training range, the 640-acre no-drop target area, three five-acre no-drop target areas, and nine emitter sites. The remaining lands would be leased from the State of Idaho.

Alternative D would involve withdrawal of about 11,269 acres of public land. This alternative includes land within the proposed training range, the 640-acre no-drop target area, four five-acre no-drop targets, and nine emitter sites. The remaining lands would be leased from the State of Idaho.

III. EXISTING CONDITIONS

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Economic activity typically encompasses employment, personal income, and industrial activity. Impacts on these socioeconomic components also influence other resources such as housing availability and provision of public services. Section 3.12 of the ETI EIS describes existing socioeconomic conditions in the region.

Population and Housing

Owyhee County. Based on the 1990 Census of Population and Housing (U.S. Bureau of the Census 1991), Owyhee County had a total population of 8,392 people, or 0.8 percent of the State of Idaho total. The U.S. Bureau of the Census classifies all population in the county as rural, with averages of 1.1 and 1.2 persons per square mile for 1990 and 1995, respectively. The county's average household size was 2.84 persons, as compared to a statewide average of 2.73. The majority of the county's population is concentrated in its northern tip which maintains closer interaction with population centers in neighboring Ada and Canyon counties than with the sparse population in the remainder of Owyhee County. Since 1990, total county population has increased by 13.4 percent, based on estimates prepared by the U.S. Bureau of the Census (1996), to 9,520 people, or less than 1 percent of the state's total population. Based on the 1990

Census of Population and Housing, more than 24 percent of the Owyhee County population had income below the poverty level.

In 1980, housing supply in Owyhee County totaled 3,015 units; in 1990, this number had grown to 3,332 (an increase of 10.5 percent). Of the 1990 total housing supply, 2,820 units (or 84.6 percent) were occupied. Of that total, 57.9 percent were owner-occupied; median value of these units was \$39,900. Median rent of the 892 rental units in the county was \$172 per month. In 1990, about 79.7 percent of occupied housing units were single-family, detached units; nearly 32 percent were mobile homes or trailers. County vacancy rates in 1990 were 3.0 percent for owner-occupied units and 6.9 percent for rental units. Approximately 375 units in the county were vacant as either held for seasonal, recreational, or occasional use; for migrant workers; or other vacant, including boarded up.

Duck Valley Reservation. The 1990 Census of Population and Housing reported that the Duck Valley Reservation, which straddles the Idaho (Owyhee County)-Nevada (Elko County) border, had a total population of 1,112 people, 985 of which were considered American Indian (Shoshone-Paiute), 59 Hispanic, 65 white, 1 black, 1 Asian or Pacific Islander, and 1 classified as Other. The majority of the Reservation's population (908) live in the Nevada portion which contains the Reservation's largest community, Owyhee. Median population age was reported as 23 years for the Idaho half of the reservation and 26 years for the Nevada half.

In 1990, the Duck Valley Reservation had 420 housing units, comprising 339 single-family homes, 33 multiple-family units, and 48 mobile homes/trailers. Of this total, 343 (or 81.7 percent) were occupied. Homeowner vacancy rate was about 1.5 percent; rental vacancy rate was 10.6 percent. Median value of owner-occupied units ranged from \$42,400 in the Reservation's Nevada portion to slightly more than \$53,000 in the Idaho portion. According to the 1990 Census of Population and Housing, 2.6 percent of homes in the Reservation lacked complete plumbing facilities, 12.3 percent had no available vehicle, and 37.2 percent had no telephone.

Within Idaho, the Duck Valley Reservation had 67 housing units in 1990, or 2 percent of the Owyhee County total. Of this 67, 55 were single-family homes and 12 were classified as mobile homes or trailers. Only 48 of the total housing units were occupied. Median value of the 42 owner-occupied units was \$53,100. Subsidized renters resulted in a median rent of -\$100 per month for the area's six rental units.

Economic Activity

Owyhee County. The economy of Owyhee County slowed during the 1980s but was largely unaffected by the nationwide recession of the early 1990s. Between 1980 and 1990, total employment in the county decreased by nearly 300 jobs (from 3,464 to 3,195) as compared to increases of nearly 90,000 statewide. Overall, the 15 years between 1980 and 1994, total employment growth in the county expanded very slightly at 0.1 percent per year (or by a total of 1.3 percent), which was greatly outpaced by Idaho as a whole (2.6 percent job growth per year, or 39.9 percent growth overall) and the rest of the nation (1.9 percent job growth per year,

or 27.0 percent job growth overall). During the recession of 1990-1991, job growth continued to increase in both the county and state while total employment decreased for the nation. By 1992, total jobs exceeded the 1980 employment level for the county. Based on economic forecasts for non-agricultural employment, the economic outlook for Owyhee County calls for continued job growth through 2005, with non-agricultural employment alone projected to increase to 2,044 jobs, or a 2.4 percent overall increase over the 1995-2005 period.

Since 1988, unemployment rates in Owyhee County (which have remained consistently less than both the state and nation averages) have had greater variation than those for the State of Idaho and the nation as a whole. Unemployment rates peaked most recently during the nationwide recession in 1991 (at 5.9 percent); since reporting an unemployment rate of 5.6 percent in 1993, county unemployment rates have decreased significantly to 2.8 percent in June 1996 (as compared to 5.2 percent for the state and 5.3 for the nation) (Idaho Department of Employment 1996).

In 1994, agriculture represented the largest employment sector in the county with 945 jobs (30.3 percent of all jobs). Government (18.1 percent of all jobs), retail trade (12.7 percent), services (11.8 percent), and agricultural services (10.3 percent) were the next-largest sectors in the county economy. Since 1980, the mining, manufacturing, wholesale trade, finance-insurance-real estate, and construction sectors all experienced overall job losses.

Although total employment expanded during the early and mid-1990s, the regional economy did not correspondingly expand. Total earnings in the Region of Influence (ROI) in 1994 were \$68.8 million, a 15.6 percent decrease from the previous year (\$81.5 million), yet more in line with the \$67.7 million reported for 1992. (The peak in 1993 earnings is attributed to numerous factors, including increases in total wages and salaries and in farm proprietors' incomes.) The greatest earnings (nearly one-third of the ROI total) were reported for the agriculture (farm) sector (\$22.8 million), followed by government and government enterprises (\$12.9 million), mining (\$6.9 million), and retail trade (\$5.9 million). Included within the government sector are military, federal civilian, and state and local categories which reported 1994 earnings in the ROI of \$0.4 million, \$2.8 million, and \$9.8 million, respectively (U.S. Bureau of Economic Analysis 1996).

Per capita personal income in Owyhee County for 1994 was \$13,401, substantially less than the per capita personal income for Idaho (\$18,272) and for the U.S. (\$21,696). Per capita personal income in the county increased less (17.3 percent) and at a slower rate (1.2 percent per year) from the 1980 level (adjusted to 1994 dollars) as compared to the per capita personal income growth recorded for the state (24.6 percent total growth, or 1.7 percent per year) and the nation (25.6 percent total growth, or 1.8 percent per year) for that same period (U.S. Bureau of Economic Analysis 1996; U.S. Council of Economic Advisors 1996).

Median family income for Owyhee County in 1990 was \$17,600 according to the 1990 Census, which was approximately 35 percent less than the statewide median income of \$27,200. Based on 1990 Census and Idaho Department of Employment statistics, over 41 percent of the

population in Owyhee County would be considered economically disadvantaged, including 29 percent who would be considered under the poverty level.

Duck Valley Reservation. In 1990, total employment of Native Americans residing in the Duck Valley Reservation numbered 265 out of a total civilian labor force of 367 people, resulting in an overall unemployment rate of 25.1 percent, as compared to 5.2 percent for Owyhee County and 5.9 percent for Idaho during that same year.

The greatest employment sector for Native Americans residing at the reservation is Professional and Related Services which employs 121 people (hospitals, health services, and educational services comprise the principal employment fields within this sector). Public administration (with 41 employees), agriculture, forestry, and fishing (29 employees), mining (20 employees), and retail trade (18 employees) represent the next-greatest employment sectors.

According to the 1990 *Census of Population and Housing*, median family income for the Idaho portion of the reservation in 1990 was \$20,750, which was 24 percent less than the statewide median income of \$27,200 but 18 percent greater than the countywide median of \$17,600. Median family income for the Nevada portion of the reservation in 1990 was \$15,000, less than the Owyhee County, Idaho, reservation portion and Idaho state medians. (Median income aggregated for the entire Duck Valley Reservation is not available.)

Based on 1990 census statistics, 87 (or 35 percent) of the 246 Native American families residing at the Duck Valley Reservation were considered to have total annual income below the poverty level. In the reservation's Idaho portion, 13 (or 31 percent) of the 42 families were considered under the poverty level as compared to an Owyhee County total of 24 percent. A total of 36.3 percent of the reservation's Native American individuals were considered to live below the poverty level (35.5 percent for the Idaho portion and 36.5 percent for Nevada) in 1990 as compared to 29 percent of individuals in Owyhee County.

Public Services and Public Finance

Owyhee County. Public services within Owyhee County include fire suppression, law enforcement, search and rescue, sewer service, highway maintenance, public libraries, and public education. Public services would not be impacted under implementation of the proposed action or any of the identified alternatives; therefore, the following discussion is limited to a brief description of public education, law enforcement, and search and rescue.

Eight school districts with nine elementary and seven secondary schools provide public education to school-age children in Owyhee County (Idaho Department of Education 1996). During the 1995-1996 school year, school enrollment totaled 4,346 students in all eight school districts.

Law enforcement and search and rescue services for most of Owyhee County are provided by the County Sheriff's Department, which employs one full-time sheriff, seven full-time deputies,

and eleven administrative support personnel. The Sheriff's Department is augmented by an additional 30 or more civilian volunteers for search and rescue activities. The Sheriff's Department is also occasionally supported by the Rimrock Rescue Mission, a 10-person volunteer organization located in Elmore County (Owyhee County Sheriff's Office 1996).

Revenue sources for the county government include property taxes, payments in lieu of taxes (PILT), bond sales, revenue sharing from sales taxes, and other state and local taxes and fees. The Payments in Lieu of Taxes Act (Public Law 94-565) provides payments to local governments containing certain federally owned (or entitlement) lands. Owyhee County currently records 3,623,670 entitlement acres, all but 27 acres of these federal lands are administered by BLM. PILT are designed to supplement other federal land payments local governments may be receiving. Payments to local governments may be calculated using two different formulas; in either case, total acreage of entitlement land within a designated local government jurisdiction is a calculation component.

There are more than 3,600,000 total acres of federal land in Owyhee County. PILT is paid on roughly 92 percent of this land to compensate for property tax losses due to federal ownership. In 1995, Owyhee County collected \$423,000 in PILT moneys, roughly 12 cents per acre. PILT moneys distributed to the county enter the county's current expense fund which is used to fund county administrative costs, the Sheriff's office, and the coroner's office, among other services.

Other Districts and Bureaus. The State of Idaho and BLM lease grazing rights on their lands in Owyhee County by geographical areas known as *allotments*. A number of public agencies, including the state, BLM, and school districts, receive funds raised through the collection of grazing fees on these lands. Grazing fees are based on amount of forage and other factors. The State of Idaho maintains 179 allotments for grazing in Owyhee County; in 1996, the state will collect a projected \$186,762 through grazing fees. (State grazing fees are scheduled to be \$4.58 per animal unit month [AUM] in 1997, down from \$4.88 per AUM in 1996 and \$5.15 per AUM in 1995.)

In fiscal year (FY) 1996, BLM grazing fees were set at \$1.35 per AUM, a decrease from \$1.61 per AUM in FY 1995 (BLM grazing fees are scheduled to remain \$1.35 per AUM in FY 1997). BLM collected an estimated \$575,500 in grazing fees for Owyhee County in FY 1995; through the first ten months of FY 1996, BLM had collected \$484,500 in grazing fees for the county.

Duck Valley Reservation. Within the Reservation, law enforcement and road maintenance is provided by Bureau of Indian Affairs. Health Services include a 15-bed inpatient clinic and emergency room, outpatient, and community health services in the community of Owyhee in Nevada. Education-related statistics for Native American residents of the Duck Valley Reservation indicate that in 1990, 315 students were receiving public primary, secondary, or college education.

Livestock Grazing

Owyhee County. The 1992 Census of Agriculture identified a total of 561 farms/ranches in Owyhee County containing about 752,032 acres of land; comparatively, in 1987, there were 573 farms/ranches operating on 716,637 acres in Owyhee County. This change is indicative of a shift toward consolidation of operations, with fewer owners controlling larger plots of land. There were 339 farms/ranches with cattle and calves, and 32 farms/ranches with sheep and lambs in 1992. Of the 339 cattle and calf operations, 244 farms/ranches were classified as beef cattle operations. In 1992, the 339 cattle and calves operations sold 84,326 heads at a total market value of \$49,659,000. The 32 sheep and lamb operations had an inventory of 12,189 animals; lamb, sheep, and wool sales grossed \$611,000 in 1992.

The cattle and calf industry in Idaho is driven by national markets for beef and meat products. Nationally, beef consumption has begun to increase again, following declines in the 1980s and early 1990s. From 1987 to 1992, the number of cattle on farms/ranches in Idaho increased from 1.77 million to 1.81 million animals. However, the number of farms/ranches with cattle and calves decreased from 13,481 in 1987 to 12,527 in 1992, further evidence of the trend toward consolidation of operations (U.S. Department of Commerce 1994).

Many farming/ranching operations in Owyhee County rely on public grazing lands to meet their feeding requirements. According to the 1992 Census of Agriculture, 98 ranchers and farmers held grazing permits in Owyhee County, 94 of which are administered under the Taylor Grazing Act. Fifteen of the 98 operations had permits through the U.S. Forest Service, and 26 ranches had grazing permits issued from an unspecified source. The 98 operations that had grazing permits controlled an additional 351,176 acres for an average size of 3,583 acres per operation; more than 57 percent of the operations had more than 1,000 acres each.

In Owyhee County, 3.6 million acres of public grazing land is controlled by the BLM. The Boise District of the BLM (the District) manages some 5.4 million acres in four resource areas: Owyhee, Bruneau, Cascade, and Jarbidge. The State of Idaho is the second largest public grazing land owner, controlling approximately 330,800 acres of land.

Clover Butte and Vicinity. The distribution of state (Idaho) and federal (BLM) grazing allotments within Owyhee County overlap component sites of the proposed action that are considered for withdrawal. Table H-1 details proposed project sites and grazing allotments. The table identifies allotment name, number, ownership, approximate acreage, total AUMs over the entire allotment, and estimated AUMs and revenue directly associated with areas proposed for withdrawal.

The Clover Butte Alternative falls within two grazing allotments: one operated by BLM (Poison Creek) and one operated by the State of Idaho (G-7567). In total, the Poison Creek allotment supports 16,448 AUMs; state allotment G-7567 supports 41 AUMs. The portion of the Poison Creek allotment lying within Clover Butte represents about 6 percent (11,200 acres) of the allotment's total area (185,855 acres). On the other hand, all 640 acres of state allotment G-7567 lie within the proposed Clover Butte Alternative.

Animal units per month were analyzed assuming an even distribution across an allotment. While it is recognized that forage is not evenly distributed over the entire allotment, this approach is sufficiently accurate to approximate the affected AUMs associated with the alternatives. Assuming that AUMs are evenly distributed over each allotment, 991 AUMs in the Poison Creek allotment and all 41 AUMs in G-7567 would be affected by withdrawal of acreage for the Clover Butte Alternative. Based on 1996 grazing fees of \$1.35 per AUM (federal) and \$4.88 per AUM (state) collected for a grazing season, an estimated total of \$1,537.93 in fees are collected for grazing rights on the Clover Butte Alternative.

Grasmere and Vicinity. The Grasmere Alternative lies within three federal (Wickahoney, China Creek, and Crab Creek) and four state (G-6317 [section 36], G-6313 [section 33 and 34], and G-6730 [sections 10, 11, and 16]) grazing allotments. Total allotment acreages and actual AUMs per month are shown in Table H-1. Assuming that AUMs are evenly distributed over each allotment, 766 AUMs in federal allotments and 217 AUMs in state allotments would be affected by withdrawal of acreage for the Grasmere Alternative. Based on 1996 federal and state grazing fees collected over a six-month grazing season, an estimated \$2,092.22 in seasonal fees are collected for grazing rights on the Grasmere Alternative.

Juniper Butte and Vicinity. The Juniper Butte Alternative lies within one federal (Juniper Draw) and two state (G-7076 [section 36] and G-7728 [section 16]) grazing allotments. Total allotment acreages and actual AUMs per month are shown in Table H-1. In total, the Juniper Draw allotment supports 1,806 AUMs over its 18,717 total acres; state allotments G-7076 and G-7728 (each encompassing 640 acres) together support 180 AUMs.

If the Juniper Butte Alternative were selected, an estimated 10,600 acres (57 percent) of Juniper Draw, 320 acres (50 percent) of G-7076, and 640 acres (100 percent) of G-7728 would be withdrawn. Assuming that AUMs are evenly distributed over these allotments, 1,023 AUMs in federal allotments and 148 AUMs in state allotments would be affected by withdrawal of acreage for the Juniper Butte Alternative. Based on 1996 federal and state grazing fees collected over a grazing season, an estimated \$2,103.02 in fees are collected seasonally for grazing rights on the Juniper Butte Alternative.

Proposed No-Drop Areas and Emitter Sites. As with the proposed training ranges, total revenue generated by state and federal grazing fee collections was estimated for each of the proposed no-drop areas based on co-occurring allotments, AUMs, and affected acreage (Table H-1). ND-1, which encompasses 640 acres of the West Canyon View federal grazing allotment, currently generates an estimated \$112 in grazing fees per season. The remaining no-drop areas, each five acres in size, each generate less than \$6 per season in collected fees.

Total revenue generated by state and federal grazing fee collections was also estimated for each of the proposed emitter sites based on co-occurring allotments, AUMs, and affected acreage (Table H-1). The emitter sites, all one acre or less in size, each generate less than 60 cents per season in collected fees.

Table H-1. Grazing Allotments, Animal Units per Month, and Estimated Revenue for Project Components, 1996
(Page 1 of 4)

Project Component	Affected Allotment Acreage	Allotment Ownership	Allotment Name	Allotment Number	Total Allotment Acreage	Total Allotment Animal Units per Month (AUMS)	Acres per AUM	Allotment AUMs per Acre	AUMs Affected by Project Area	Total 1996 Estimated Revenue ¹
Target Ranges										
Clover Butte	11,200	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	991	\$ 1,337.85
	640	State	-	G-7567	640	41	15.6	0.06	41.0	\$ 200.08
Total	11,840									\$ 1,537.93
Grasmere	170	Federal	Wickahoney	00885	2,800	200	14.0	0.07	12.1	\$ 16.20
	8,360	Federal	China Creek	00883	33,450	3,136	10.7	0.09	752.4	\$ 1,015.74
	110	Federal	Crab Creek	00841	15,060	233	64.6	.02	1.70	\$ 2.30
	400	State	-	G-6313 (Sec 33 and 34)	400	40	10.0	0.10	32.0	\$ 156.16
	640	State	-	G-6317 (Sec 36)	640	65	9.8	0.10	65.0	\$ 317.20
	640	State**	-	G-6496 (Sec 28)	640	64	10.0	0.10	64.0	\$ 312.32
	320	State**	-	G-6496 (Sec 33)	320	32	10.0	0.10	15.3	\$ 74.66
	40	State	-	G-6730 (Sec 10)	40	5	8.0	.13	8.0	\$ 39.04
Total	160	State	-	G-6730 (Sec 11)	160	16	10.0	.10	16.0	\$ 78.08
	160	State**	-	G-6730 (Sec 16)	640	66	9.7	.10	16.5	\$ 80.52
	11,000									\$ 2,092.22
Juniper Butte	10,600	Federal	Juniper Draw	01138	18,717	1,806	10.4	0.10	1,022.8	\$ 1,380.78
	320	State	-	G-7076 (Sec 36)	640	64	10.0	0.10	32.0	\$ 156.16
	640	State	-	G-7728 (Sec 16)	640	116	5.5	0.18	116.0	\$ 566.08
Total	11,560									\$ 2,103.02

Table H-1. Grazing Allotments, Animal Units per Month, and Estimated Revenue for Project Components, 1996
(Page 2 of 4)

Project Component	Affected Allotment Acreage	Allotment Ownership	Allotment Name	Allotment Number	Total Allotment Acreage	Total Allotment Animal Units per Month (AUMS)	Acres per AUM	Allotment AUMs per Acre	AUMs Affected by Project Area	Total 1996 Estimated Revenue ¹
No-Drop Areas										
ND-1	640	Federal	West Canyon View***	00811	4537	-	7.9	0.13	83.2	\$ 112.32
ND-2	5	State	-	G-7566	640	72	8.9	0.11	0.6	\$ 2.93
ND-4	5	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.6	\$.81
ND-5	5	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.6	\$.81
ND-6	5	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.4	\$.54
ND-7	5	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.4	\$.54
ND-8	5	Federal	Highway Field***	00848	14,905	16,448	25.0	0.04	0.2	\$.27
Total										\$ 118.22
Emitter Sites										
AA	0.25	Federal	Twin Butte***	01145	44,958	-	4.7	0.21	0.05	\$ 0.07
AB	0.25	Federal	Bruneau Hill***	01057	46,789	-	4.7	0.21	0.05	\$ 0.07
AC	0.25	State	-	G-7429	640	136	4.7	0.21	0.05	\$.24
AD	0.25	Federal	Juniper Draw	01138	18,717	1,806	10.4	0.10	0.02	\$.03
AE	0.25	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.02	\$.03
AF	0.25	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.02	\$.03
AG	0.25	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.02	\$.03
AH	0.25	Federal	Clover Crossing*	01136	35,907	2,609	13.8	0.07	0.02	\$.03

Table H-1. Grazing Allotments, Animal Units per Month, and Estimated Revenue for Project Components, 1996
(Page 3 of 4)

Project Component	Affected Allotment Acreage	Allotment Ownership	Allotment Name	Allotment Number	Total Allotment Acreage	Total Allotment Animal Units per Month (AUMS)	Acres per AUM	Allotment AUMs per Acre	AUMs Affected by Project Area	Total 1996 Estimated Revenue ¹
AI	0.25	Federal	Echo Group***	01149	86,173	-	4.7	0.21	0.05	\$.07
AJ	0.25	State	-	G-7429	640	136	4.7	0.21	0.05	\$.24
AK	0.25	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.03	\$.04
AL	0.25	Federal	Big Lake/Center*	00840/00809	140,364	17,774	7.9	0.13	0.03	\$.04
AM	0.25	Federal	Big Lake/Crab Creek	00840/00841	140,364	17,774	7.9	0.13	0.03	\$.04
AN	0.25	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.03	\$.04
AO	0.25	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.03	\$.04
AP	0.25	Federal	Crab Creek/Center*	00841/00809	140,364	17,774	7.9	0.13	0.03	\$.04
AQ	0.25	Federal	Mary's Creek	00849	19,589	-	10.0	0.10	0.03	\$.04
AT	0.25	Federal	Northwest/Center*	00808/00809	140,364	17,774	7.9	0.13	0.03	\$.04
AU	0.25	Federal	Highway Field***	00848	14,905	16,448	25.0	0.04	0.01	\$.04
AV	0.25	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.03	\$.04
BA	1	Federal	Flat Top***	01059	37,464	-	4.7	0.21	0.21	\$.28
BB	1	Federal	Echo Group***	01149	86,173	-	4.7	0.21	0.21	\$.28
BC	1	Federal	Poison Creek	01050	185,855	16,448	11.3	0.09	0.09	\$.12
BD	1	Federal	Tokum Bambi***	00864	20,577	-	10.0	0.10	0.10	\$.14
BE	1	Federal	Crawfish/Poison Creek	01118/01050	185,855	16,448	11.3	0.09	0.09	\$.12
BF	1	Federal	West Canyon View***	00811	4,537	-	7.9	0.13	0.13	\$.18

Table H-1. Grazing Allotments, Animal Units per Month, and Estimated Revenue for Project Components, 1996
(Page 4 of 4)

Project Component	Affected Allotment Acreage	Allotment Ownership	Allotment Name	Allotment Number	Total Allotment Acreage	Total Allotment Animal Units per Month (AUMS)	Acres per AUM	Allotment AUMs per Acre	AUMs Affected by Project Area	Total 1996 Estimated Revenue
BG	1	Federal	Crab Creek***	00841	15,398	-	7.9	0.13	0.13	\$.18
BI	1	Federal	Center*	00809	140,364	17,774	7.9	0.13	0.13	\$.18
BJ	1	State	-	G-7566	640	72	8.9	0.11	0.11	\$.54
BK	1	Federal	Twin Butte***	01145	44,958	-	4.8	0.21	0.21	\$.28
Total										\$ 3.51

Notes: 1. Revenue calculations based on 1996 federal (\$1.35) and state (\$4.88) grazing fees charged per AUM. Annual estimated revenue conservatively assumes AUM fees collected for a grazing season. This season varies in length but the total AUMs permitted for a season on an allotment is fixed.

*Based on historic grazing allotment statistics

**State school endowment lands managed in coordination with BLM

***AUM statistics unavailable for allotment; calculations based on grazing allotment statistics for closest documented allotment.

Sources:

Personal communication, Taylor 1996. Idaho Department of Lands.
Interior Columbia River Basin Ecosystem Management Project. 1995 digital data.
Personal communication, Costello 1996. U.S. Bureau of Land Management.
Personal communication, Josie 1997. U.S. Bureau of Land Management.

Mining

The mining industry maintains a relatively small but important role in the economy of Owyhee County (U.S. Bureau of Mines 1993). Based on employment and earnings information, employment directly associated with the mining sector represented 122 jobs (or 3.4 percent) of total county employment (3,510 jobs) in 1994, down from 169 jobs (or 4.8 percent of county employment) in 1992. In 1994, the mining sector recorded earnings of \$6.9 million (or 10.0 percent of total county earnings), down from \$8.4 million (or 12.4 percent of total county earnings) in 1992 (U.S. Bureau of Economic Analysis 1996). Mining activity in the region includes limestone, jasper, guano, and sand and gravel.

Recreation

The recreation industry represents a relatively small portion of the Owyhee County economy. According to the 1990 Census of Population and Housing, an estimated total of 15 workers were directly employed in the entertainment/recreation industry which represented less than 0.1 percent of total county employment. No new or significant increases in employment opportunities in the recreation industry have been reported in the county since 1990. Retail trade, which benefits slightly from recreation and tourism activities, reported 446 employees in 1994 accounting for about \$5.9 million in earnings (U.S. Bureau of Economic Analysis 1996).

The Lower Snake River District of the BLM have attempted to capture the change in recreation activity on the Bruneau-Jarbridge River systems by comparing estimated floater use on the Bruneau in the years 1983 to 1985 with floater use in the years 1995 to 1997. In the earlier period, estimated floater use ranged from a high of about 300 persons in 1983 (a good water year), to a low of about 100 persons in 1985 (a low water year). In 1995, estimated boater use was 3,114 persons; in 1996, 3,262 persons; and, in 1997, an estimated 3,176 persons floated the Bruneau (BLM 1997). Recreation use on these rivers has increased significantly in recent years, reflecting national trends on similar rivers throughout the west. Most professional float providers are not headquartered in Owyhee County. Recreation, while not a major industry in Owyhee County, is an important, emerging contributor to local economies in the region.

IV. QUANTIFIABLE ECONOMIC EFFECTS RESULTING FROM WITHDRAWAL OF 12,000 ACRES FROM A RANCHING OPERATION

This analysis presents the estimated quantifiable impacts that result from the removal of the 12,000 acres of a ranching operation's existing grazing allotments. Consequences to ranching operations would include quantifiable loss of grazing, as well as non-quantifiable disruptions to grazing operations. These disruptions affect access, water lines, fencing, and scheduling, as well as actual grazing land. The Air Force is committed to provide direct compensation and compensation in-kind to insure that the ranching operation impacted by both quantifiable and non-quantifiable disruptions is made whole.

The quantifiable impact of reduced forage (i.e., loss of AUMs) to the affected ranching operation was estimated by assessing the direct change in net operating income of a typical livestock operation.

The potential economic impacts to the ranch operating in the affected areas were based on typical livestock operations as determined by the University of Idaho Cooperative Extension System (Smathers et al. 1996). A livestock financial model was developed for typical operations in the region based on an annual cow-calf budget for a 500-cow herd grazing on public lands for a ten and a half month season of use. The livestock financial model used for this analysis provides a detailed accounting of the expected revenues and costs, on a per head basis, of a typical 500-cow herd summered and wintered on public lands. The change in net operating income is estimated assuming that the herd size is reduced proportionately to the lost forage (i.e., reduction in AUMs). For example, if 1,000 acres of grazing land with 75 AUMs were withdrawn from use, the livestock operation experiencing the loss of this grazing land would be assumed to reduce herd size by the number of animal units (AUs) no longer supported by the lost AUMs. This example is expanded below.

Revenues for the typical cow-calf operation are the gross receipts received for steer calves, heifer calves, aged bulls, cull cows, and cull heifers. Operating costs include feed requirements, marketing, veterinary medicine, equipment maintenance and repair, and labor (see Table H-2). An incremental change in the herd size of the operation affects both the expected revenues and costs of the operation. The difference between the change in revenue and the change in operating costs is the change in net operating income for the affected ranch. It should be noted that the livestock financial model used for this analysis is not intended to represent a specific individual ranching operation potentially affected by selection of an action alternative. Rather, this generalized model provides an indication of the magnitude of potential economic impacts to a rancher assuming direct loss of the entire 12,000 acres of grazing.

To determine economic consequences for each action alternative, the affected allotment acreage and associated AUMs were combined and treated as a single operation. Depending upon the alternative, between one or two ranchers would actually be affected if an action alternative were selected. This simplifying assumption means that a reduction in forage, as determined by the loss of AUMs, directly reduces the carrying capacity (i.e., herd size) of the ranching operation affected. If two ranchers were to be affected by an alternative, an agreement would have to be reached among the ranchers and the Air Force regarding the distribution of any direct compensation or compensation in-kind.

The reduction in AUMs range from 983 AUMs for Grasmere to 1,171 AUMs for Juniper Butte. Based on a ratio of one animal unit (AU) for every 13 AUMs, as indicated in the Owyhee Resource Management Plan, the carrying capacity of a livestock operation which sustained a loss of 983 to 1,171 AUMs would be reduced by approximately 75 to 90 animal units.

Table H-2. Livestock Financial Model - Alternatives B, C, and D Impacts

	COW-CALF BUDGET FOR 500-HEAD HERD						IMPACTS		
	Wt. Each	Unit	Total # of Head or Units	Price or Cost per Unit	Total Value	Value or Cost per Head	Alt B (-1032 AUMs / -79.4 AUs)	Alt. C (-983 AUMs / -75.6 AUs)	Alt. D (-1171 AUMs / -90.1 AUs)
Gross Revenues									
Steer Calves	4.15	cwt	225	\$75.00	\$70,031.25	\$140.06	-\$11,120.76	-\$10,588.54	-\$12,619.41
Heifer Calves	3.70	cwt	130	69.00	33,189.00	66.38	-5,270.57	-5,018.33	-5,980.84
Aged bull	16.00	cwt	10	40.00	6,400.00	12.80	-1,016.62	-967.68	-1,153.28
Cull cows	10.00	cwt	75	35.00	26,250.00	52.50	-4,168.50	-3,969.00	-4,730.25
Cull repl heifer	7.20	cwt	10	67.00	4,824.00	9.65	-766.21	-729.54	-869.47
Operating Costs									
Alfalfa Hay		ton	384.00	70.00	26,880.00	53.76	4,268.54	4,064.26	4,843.78
Feed Barley		cwt	427.50	5.30	2,265.75	4.53	359.68	342.47	408.15
Protein Supplement 20%		cwt	345.00	7.00	2,415.00	4.83	383.50	365.15	435.18
Federal Range		aum	6,363.00	1.75	11,135.25	22.27	1,768.24	1,683.61	2,006.53
Crop Aftermath		aum	795.00	10.00	7,950.00	15.90	1,262.46	1,202.04	1,432.59
Salt		lb	8,800.00	0.06	528.00	1.06	84.16	80.14	95.51
Marketing		head	500.00	5.63	2,815.00	5.63	447.02	425.63	507.26
Veterinary Medicine		\$	6,622.45	1.00	6,622.45	13.24	1,051.26	1,000.94	1,192.92
Machinery		\$	2,285.82	1.00	2,285.82	4.57	362.86	345.49	411.76
Vehicles		\$	8,848.17	1.00	8,848.17	17.70	1,405.38	1,338.12	1,594.77
Equipment		\$	136.65	1.00	136.65	0.27	21.44	20.41	24.33
Housing and Improvements		\$	2,359.31	1.00	2,359.31	4.72	374.77	356.83	425.27
Hire Labor		hr	2,450.00	6.75	16,537.50	33.08	2,626.55	2,500.85	2,980.51
Owner Labor		hr	1,668.00	6.75	11,259.00	22.52	1,788.09	1,702.51	2,029.05
Interest on Op. Capital		\$	36,258.69	0.10	3,625.87	7.25	575.65	548.10	653.23
Total Gross Revenues							-\$22,342.37	-\$21,273.08	-\$25,353.24
Total Operating Costs							\$16,779.60	\$15,976.55	\$19,040.83
NET OPERATING INCOME							-\$5,562.76	-\$5,296.54	-\$6,312.41

Source: University of Idaho Cooperative Extension System (Smathers et al. 1996).

The change in net operating income for a representative ranching operation at each of the training ranges was determined by applying the number of affected animal units associated with each alternative to the livestock financial model. The model provides an accounting of the quantifiable elements of a typical livestock operation's revenues and costs on a per head basis. Specific information for each of the three action alternatives was used as input to determine the potential change in net operating income for ranching operations associated with each 12,000-acre alternative. Table H-3 summarizes the change in annual net operating income from Table H-2 and includes the change in annual net earnings (which is the sum of Hire Labor and Owner Labor from Table H-2) for each alternative.

Table H-3. Quantifiable Potential Ranch Operation Impacts			
	<i>Alternative B</i>	<i>Alternative C</i>	<i>Alternative D</i>
Change in annual net operating income	-\$5,563	-\$5,297	-\$6,312
Change in annual direct labor earnings	-\$4,415	-\$4,203	-\$5,010

V. QUANTIFIABLE RESULTS TO LOCAL PUBLIC FINANCE FROM WITHDRAWING 12,000 ACRES FROM THE PUBLIC DOMAIN

Implementation of an action alternative would affect up to 12,000 acres of federal and state grazing allotment lands. Data regarding acreage and AUMs for each of the affected grazing allotments were provided by the Idaho Department of Lands and the BLM. Only a portion of many of the affected grazing allotments would be withdrawn, so to estimate the loss of AUMs, it was assumed that AUMs are evenly distributed over each allotment with the loss of AUMs proportional to the loss of acreage in each allotment. For example, if 15 acres were to be withdrawn from a 100-acre allotment with 25 AUMs, the lost AUMs associated with the 15-acre withdrawal would amount to 3.75 AUMs (e.g., $3.75 \text{ AUMs} = 15 \text{ acres} \div 100 \text{ acres} \times 25 \text{ AUMs}$). This process was completed for each of the affected allotments and is presented in detail in Table H-1. The total affected AUMs for each training range alternative was determined by adding the AUMs associated with the withdrawn portion of each affected allotment within each training range. The results of these calculations indicated that withdrawal of lands associated with the training ranges would result in the loss of between 983 and 1,171 AUMs on state and federal grazing allotments combined (see Table H-4).

Based on 1996 grazing fees of \$1.35 per AUM on federal lands and \$4.88 per AUM on state lands collected over a grazing season, fees collected by BLM and the state would be reduced by \$1,538 to \$2,103 (Table H-4). Compared to the total annual collected grazing fees of

approximately \$670,000 for BLM and the State of Idaho, the projected loss amounts to less than one percent of total fees for the county.

Table H-4. Potential Economic Impacts from Withdrawal of 12,000 Acres of Public Lands			
	<i>Alternative B</i>	<i>Alternative C</i>	<i>Alternative D</i>
Change in PILT revenues	-\$1,385	-\$1,081	-\$1,315
Affected acreage	11,840	11,000	11,560
Affected AUMs	1,032	983	1,171
Change in grazing fees	-\$1,538	-\$2,092	-\$2,103

During the past 10 years, the federal grazing fee has fluctuated by an amount of approximately 50 percent of the current fee. For this analysis, the BLM grazing fee impact was based on the current federal grazing fee, which is at a 10-year low. Therefore, depending on future variations in the fee, the potential lost grazing dollars could be greater than the estimated loss of \$1,538 to \$2,103. The potential losses would still amount to less than 1 percent of total grazing fees for Owyhee County.

Owyhee County receives PILT as compensation for property tax losses due to government ownership of land within its boundaries. Under the three training range alternatives, the Air Force proposes to withdraw up to 12,000 acres of public land required for development of the training range, no-drop target areas, and emitter sites. PILT losses were calculated by multiplying the number of acres to be withdrawn under each alternative by the per acre PILT revenue. The per acre PILT revenue, roughly 12 cents, was determined by dividing Owyhee County's total annual PILT revenues (\$423,000) by the total acres of federal land in Owyhee County (3,600,000 acres). Therefore, if 12,000 acres were withdrawn, annual PILT losses would amount to an estimated \$1,440 (12,000 times \$0.12).

Transfer of public lands to the Air Force would result in the permanent loss of between \$1,081 and \$1,385 in annual PILT revenues for Owyhee County. Annual county revenues amount to \$3,455,559 of which \$423,000 are PILT, therefore the estimated PILT losses represent less than one percent of PILT revenues and less than one-tenth of 1 percent of total county revenues. No impacts to other county revenue sources or to overall county expenditures are expected.

VI. QUANTIFIABLE CONSEQUENCES OF ETI AND THE NET REMOVAL OF 1,000 ACRES FROM GRAZING IN OWYHEE COUNTY

The following discussion applies to any of the three training range alternatives.

Economic Activity

Long-term employment impacts to Owyhee County under any range development alternative would be small. On any normal work day, 28 to 30 Air Force and contractor employees involved in activities at the range are assumed to commute from Mountain Home AFB or nearby communities. These employees are expected to be from existing Air Force support operations. Estimated long-term employment impacts as a result of operation of any of the proposed training range alternatives would amount to less than one full-time job. Consequently, no population, housing or related impacts are anticipated. There are no long term increases in Owyhee County employment expected under any of the development alternatives.

Although there are no long-term impacts expected, short-term increases in economic activity would occur. Construction of range facilities would take place over a period of three to four years, creating employment opportunities in Owyhee County and contributing to regional business sales of construction-related goods and services. Each \$1 million in expenditures associated with construction of an action alternative would generate about \$600,000 in regional earnings and 28 new jobs during the period of construction. This boost in employment and business activity would result in a 3 to 4 year benefit to local economies in Owyhee County and the surrounding region.

Livestock Grazing - Regional Consequences

Implementation of one of the three action alternatives would require that certain lands in Owyhee County be set aside for the tactical range, no-drop target areas, and emitter sites. These lands, currently under the control of the BLM and the State of Idaho for school endowments, are primarily used for grazing and primitive recreation. While the 300-acre primary ordnance impact area in the center of the range would be restricted, the Air Force has stated that much of the remaining area within the proposed 12,000-acre tactical training range would be available for livestock grazing.

The Air Force estimates that approximately 11,000 acres of the 12,000 withdrawn for any action alternative would continue to be used for livestock grazing. For the region as a whole, this means that a new range would remove about 1,000 acres from grazing, consisting of the 300-acre primary ordnance impact area, roads, and emitter sites. The regional consequences of a loss of 1,000 acres of rangeland would result in a regional reduction of not more than 5.75 to 7.5 animal units. The direct economic impact from a loss of 1,000 acres of rangeland would amount to an estimated loss of \$497.43 in net operating income and \$394.76 in direct labor earnings (Table H-5). The direct labor earning is the sum of Hire and Owner Labor.

The total impact to regional economic activity, determined utilizing economic multipliers published by the Bureau of Economic Analysis (U.S. Department of Commerce 1992), is estimated to be a loss of not more than a summed total of \$4,000 in annual business activity to all regional activities associated with and/or supplying ranching operations. The loss of 1,000 acres would result in a reduction of about \$960 in annual earnings, and what would amount to about one-twentieth of one job. This total regional impact is believed to be not significant.

Table H-5. Livestock Financial Model - Impacts of 1K Acre Loss

	COW-CALF BUDGET FOR 500-HEAD HERD					IMPACTS	
	Wt. Each	Unit	Total # of Head or Units	Price or Cost per Unit	Total Value	Value or Cost per Head	1K Acre Loss (-92.3 AUMs/ -7.1 AUs)
Gross Revenues							
Steer Calves	4.15	cwt	225	\$75.00	\$70,031.25	\$140.06	-\$994.43
Heifer Calves	3.70	cwt	130	69.00	33,189.00	66.38	-471.30
Aged bull	16.00	cwt	10	40.00	6,400.00	12.80	-90.88
Cull cows	10.00	cwt	75	35.00	26,250.00	52.50	-372.75
Cull repl heifer	7.20	cwt	10	67.00	4,824.00	9.65	-68.52
Operating Costs							
Alfalfa Hay		ton	384.00	70.00	26,880.00	53.76	381.70
Feed Barley		cwt	427.50	5.30	2,265.75	4.53	32.16
Protein Supplement 20%		cwt	345.00	7.00	2,415.00	4.83	34.29
Federal Range		aum	6,363.00	1.75	11,135.25	22.27	158.12
Crop Aftermath		aum	795.00	10.00	7,950.00	15.90	112.89
Salt		lb	8,800.00	0.06	528.00	1.06	7.53
Marketing		head	500.00	5.63	2,815.00	5.63	39.97
Veterinary Medicine		\$	6,622.45	1.00	6,622.45	13.24	94.00
Machinery		\$	2,285.82	1.00	2,285.82	4.57	32.45
Vehicles		\$	8,848.17	1.00	8,848.17	17.70	125.67
Equipment		\$	136.65	1.00	136.65	0.27	1.92
Housing and Improvements		\$	2,359.31	1.00	2,359.31	4.72	33.51
Hire Labor		hr	2,450.00	6.75	16,537.50	33.08	234.87
Owner Labor		hr	1,668.00	6.75	11,259.00	22.52	159.89
Interest on Op. Capital		\$	36,258.69	0.10	3,625.87	7.25	51.48
Total Gross Revenues							-\$1,997.87
Total Operating Costs							\$1,500.44
NET OPERATING INCOME							-\$497.43

Source: University of Idaho Cooperative Extension System (Smathers et al. 1996).

APPENDIX I

LAWS, REGULATIONS, AND GUIDELINES

APPENDIX I

RELEVANT FEDERAL STATE AND LOCAL STATUTES, REGULATIONS AND GUIDELINES

GENERAL

Executive Order 12856 (Right to Know Laws and Pollution Prevention Requirements). This order directs all federal agencies to reduce and report toxic chemicals entering any wastestream; improve emergency planning, response, and accident notification; and encourage clean technologies and testing of innovative prevention technologies. The executive order also provides that federal agencies are persons for purposes of The Emergency Planning and Community Right-to-Know Act (SARA Title III), which obliges agencies to meet the requirements of the Act.

Executive Order 12898 (Environmental Justice). This order directs federal agencies to achieve environmental justice by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations in the United States and its territories and possessions. The order creates an Interagency Working Group on Environmental Justice and directs each Federal agency to develop strategies within prescribed time limits to identify and address environmental justice concerns. The order further directs each Federal agency to collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when facilities or sites become the subject of a substantial Federal environmental administrative or judicial action and to make such information publicly available.

Executive Order 12372 (Intergovernmental Review of Federal Programs). This order directs federal agencies to "make efforts to accommodate state and local elected officials' concerns with proposed . . . direct federal development." It further states, "for those cases where the concerns cannot be accommodated, federal officials shall explain the bases for their decision in a timely manner." The executive order requires federal agencies to provide state and local officials the opportunity to comment on actions that could affect their jurisdictions, using state-established consultation processes when possible.

National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 U.S.C. 4347, as amended). Requires federal agencies to take the environmental consequences of proposed actions into consideration in their decisionmaking process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA to implement and oversee federal policy in this process.

AFI 32-7061 (Environmental Impact Analysis Process). Air Force implementation of the procedural provisions of the NEPA and CEQ regulations.

Federal Land Policy and Management Act (FLPMA) of 1976: Defines the mission of the BLM and requires the BLM to inventory and manage all resources within the lands it administers.

AIRSPACE

Federal Aviation Act of 1958 created the Federal Aviation Administration (FAA) and charged the FAA Administrator with ensuring the safety of aircraft and the efficient utilization of the National Airspace System, within the jurisdiction of the United States.

Federal Aviation Regulation Part 71 (1975) delineates the designation of federal airways, area low routes, controlled airspace, and navigational reporting points.

Federal Aviation Regulation Part 73 (1975) defines special use airspace and prescribes the requirements for the use of that airspace.

Federal Aviation Regulation Part 91 (1990) describes the rules governing the operation of aircraft within the United States.

FAA Handbook 7400.2C prescribes policy, criteria, and procedures applicable to rulemaking and non-rulemaking actions associated with airspace allocation and utilization, obstruction evaluation and marking airport airspace analyses, and the establishment of air navigation aids.

FAA Handbook 7110.65 prescribes air traffic control procedures and phraseology for use by personnel providing air traffic control services in the United States.

NOISE

Executive Order 12088, Federal Compliance with Pollution Control Standards (1978) requires the head of each executive agency to be responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution, including noise pollution, with respect to federal facilities and activities under the control of the agency.

Federal Interagency Committee on Urban Noise (1980) defines noise levels for various land uses and may result in areas that will not qualify for federal mortgage insurance. Additional sections allow for noise attenuation measures that are often required for HUD approval.

SAFETY

Air Force Instruction (AFI) 91-301. Contains Air Force occupational safety, fire prevention, and health regulations governing a wide range of activities and procedures associated with safety in the workplace.

AFI 32-2001. Defines the requirements for Air Force installation fire protection programs, including equipment, response times, and training.

Air Force Manual 91-201. Regulates and provides procedures for explosives safety and handling. Defines criteria for quantity distances, clear zones, and facilities associated with ordnance.

AFI 13-212 Vol. 1, Vol. 2, Vol. 3. Establishes procedures for the planning, construction, design, operation, and maintenance of weapons ranges. Defines criteria for target placement, weapons safety footprints, and buffer zones as well as safety procedures involving aircraft or ordnance malfunctions. AFR 50-46/Mountain Home AFB Supplement 1 details these procedures and criteria for the Saylor Creek Range.

Mountain Home AFB Bird-Aircraft Strike Hazard (BASH) Plan. Dictates measures to identify, avoid, and prevent bird-aircraft strikes.

Department of Defense Flight Information Publication. Indicates locations of potential hazards (e.g., bird aggregations, obstructions) and noise sensitive locations under military airspace and defines horizontal and/or vertical avoidance measures. Updated monthly to present current conditions.

Elmore County Airport Hazards Zoning Ordinance. Addresses zoning requirements for all Elmore County airports and establishes a requirement for a protective area around Mountain Home AFB to ensure public health and safety.

BLM Fire Management Activity Plan – Boise District 1991. Reviews fire history to date for the district, establishes fire management zones (FMZs), outlines response criteria for each zone, and defines the equipment and personnel necessary to meet fire suppression objectives.

DoD Instruction (DoDI) 6055.1. Contains occupational health guidance for managing and controlling exposure to radio frequency reduction.

Interdepartmental Support Agreement between Mountain Home AFB and Boise District BLM. Prescribes the responsibilities and areas of authority for fire management on Saylor Creek Range. Also establishes fees paid to the BLM by the Air Force for fire control outside the range impact area.

HAZARDOUS MATERIALS

Federal Statutes and Regulations

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, and the Superfund Amendments and Reauthorization Act (SARA) of 1986 provide liability and compensation for cleanup and emergency response from hazardous substances discharged into the environment and the cleanup of hazardous disposal sites.

Hazardous Materials Transportation Act (HMTA) of 1975, Title I Section 101, established criteria for shippers and carriers that manage hazardous materials and includes training and qualifications of persons handling hazardous materials.

Resource Conservation and Recovery Act (RCRA) of 1976 regulates storage, transportation, treatment, and disposal of hazardous waste that could adversely affect the environment.

Solid Waste Disposal Act (SWDA) and Amendments of 1980 amends RCRA with additional regulation of energy and materials conservation and the establishment of a National Advisory Council.

Hazardous and Solid Waste Amendments (HSWA) of 1984 significantly expanded the scope and requirements of RCRA and mandated the underground storage tank (UST) regulations.

Toxic Substance Control Act (TSCA) of 1976 principally regulates PCBs and ACM in schools.

Occupational Safety and Health Administration (OSHA) Asbestos Standard (29CFR 1926.58) lists federal requirements during construction activities for handling and removal of asbestos from equipment and building structures. The chemical hazard communication program (29CFR 1910.120) requires the identification, information, and training on

chemical hazards to be available to employees using hazardous materials and instituted material safety data sheets (MSDS) which provide this information.

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended in 1988 addresses the applications and disposal of pesticides and pesticide containers.

Idaho State Statutes and Regulations

Hazardous Waste Management Act (HWMA) of 1983, Chapter 44 Sections 39-4401 et seq., of the Idaho Code forms statutory framework for the state's system to manage hazardous waste. This act is to be consistent with RCRA by incorporation by reference of the federal regulations.

Hazardous Waste Facility Siting Act (HWFSA), sections 39-5801, et seq., Idaho Code concerns the siting criteria for hazardous waste facilities within the state of Idaho.

Idaho Administrative Procedures Act (IDAPA) 16.01.5000-16.01.5014, Chapter 52, Title 67, of the Idaho Code establishes state rules and regulations equivalent to RCRA.

EARTH RESOURCES

Federal Statutes and Regulations

Mining Law of 1872 authorizes hardrock mining (prospecting and extracting minerals) on public domain lands. It also sets the guidelines for staking mining claims on locatable mineral deposits (i.e., gold, silver, lead, asbestos, mica, fluorspar, etc.).

43 CFR 3000 Series pertains to mineral management including exploration and mining operations (43 CFR 3809).

Mineral Leasing Act of 1920 governs oil, gas and geothermal development. Provides for leasing of deposits of coal, phosphate, sodium, oil, oil shale, or gas, and lands containing deposits owned by the United States.

Common Varieties Act of 1955 governs sand, gravel, building stone, and similar materials.

BLM Manual 3031 sets standards for gathering and analyzing information on energy and mineral resources for BLM land use decisions.

Federal Lands Policy and Management Act requires the BLM inventory and manage all resources within the lands it administers.

Clean Water Act. Section 404 of this act regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers prior to such activities.

Historic Sites Act of 1935 provides the basis for the establishment of national landmarks which represent "outstanding examples of landforms, geological features, etc., or fossil deposits."

Idaho State Statutes and Regulations

Idaho Surface Mining Act of 1971 governs all surface mining in Idaho and provides guidelines for land reclamation.

Idaho Dredge and Placer Mining Act of 1954 administers the mining of placer deposits and requires reclamation plan filing.

WATER RESOURCES

Federal Statutes and Regulations

Clean Water Act of 1977, 33 USC section 1251 et seq. Under the Clean Water Act, any point source waste that discharges into waters of the United States requires a National Pollutant Discharge Elimination System (NPDES) permit. Section 404 of this act regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers prior to such activities.

Safe Drinking Water Act of 1974, 42 USC section 300f et seq., requires the Environmental Protection Agency (EPA) to establish a program which provides for the safety of the nation's drinking water. Regulations under this act can be found in 40 CFR, section 141 et seq.

Underground Injection Control (UIC) Program, 40 CFR Part 146. As part of the Safe Drinking Water Act, the UIC program establishes regulations for the injection of fluids into wells for storage or disposal which are designed to protect underground sources of drinking water.

Comprehensive Environmental Response Compensation Liability Act (CERCLA) of 1980 is the primary law that regulates remediation of environmental contamination.

Resource Conservation and Recovery Act (RCRA) of 1976 is the primary law regulating the handling of hazardous waste, which includes wastes generated during environmental clean-up.

Federal Compliance with Pollution Control Standards, Executive Order 12088, requires the head of each executive agency to be responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to federal facilities and activities under the control of the agency.

Executive Order 11988 – Flood Plain Management directs that “any federally undertaken, financed, or assisted construction project must provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains.” This order requires each federal agency to determine whether the project will occur in a floodplain and to consider alternatives. If no practical alternative is found, it requires minimizing harm and notifying the public as to why the project must be located in the floodplain. It also provides for public review and comment.

Executive Order 11990 (1977) – Protection of Wetlands requires that leadership shall be provided by involved agencies to minimize the destruction, loss, or degradation of wetlands. The order was issued to “avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands whenever there is a practicable alternative.” Federal agencies are required to provide for early public review of any plans or proposals for new construction in wetlands.

Idaho State Statutes and Regulations

Idaho Code, Chapter 2, regulates water rights throughout the state. The constitution and statutes of the State of Idaho declare all the waters of the state, when flowing in their natural channels, including the water of all natural springs and lakes within the boundaries of the state, and groundwaters of the state, to be public waters. These public waters may be appropriated and put to beneficial use. All water rights within the state are issued on a “first time, first in right” basis.

Idaho Code, Section 42-233b, allows the State of Idaho to establish a Groundwater Management Area or Critical Groundwater Area where groundwater levels are declining due to overuse of an aquifer. The state may restrict water rights within the boundaries of a groundwater area by issuing permits and approving any additional water usage.

AIR QUALITY

The Clean Air Act (Title 40 CFR parts 50 and 51), and amended in August 1977 and November 1990, dictates that the National Ambient Air Quality Standards (NAAQS) must be maintained nationwide. The Act delegates authority to state and local agencies to enforce the NAAQS and to establish air quality standards and regulations of their own. The adopted state standards and regulations must be at least as restrictive as the federal requirements. The Idaho Department of Health and Welfare (IDHW) has the authority to regulate air pollution sources within Idaho. Air pollution sources with the study area, but outside of Idaho, are regulated by the Utah Bureau of Air Quality, Nevada Department of Environmental Protection and the Oregon Department of Environmental Quality. Although mobile sources such as aircraft are exempt from air pollution permitting requirements, the operation of these sources must comply with state and federal regulation and the ambient air quality standard.

Section 169A of the Clean Air Act states that a national goal is to prevent any further impairment of visibility within federally mandated Class I areas such as National Parks and Wilderness Areas from man-made sources of air pollution. Visibility impairment is defined as reduction in regional visual range or atmospheric discoloration or plume blight from exhaust effluents. Federal criteria to determine significant impacts on visibility within Class I areas exist for stationary emission sources, but do not pertain to mobile sources since they are generally exempt from permit review by regulatory agencies. However, the IDHW does have a criterion for defining any adverse effects on visibility. An adverse effect is defined as any unacceptable anthropogenic change to the naturally occurring visibility within a Class I area.

BIOLOGICAL RESOURCES

Federal Statutes and Regulations

Endangered Species Act of 1973, 16 USC section 1531 et seq., as amended, protects proposed and listed threatened or endangered species. Formal consultation with the U.S. Fish and Wildlife Service (USFWS) is required under Section 7 of the act for federal projects and all other projects that require federal permits (e.g., U.S. Army Corps of Engineers permits) where such actions could directly or indirectly affect any proposed or listed species.

Migratory Bird Treaty Act of 1972, 16 USC sections 703 through 711, protects migratory waterfowl and all seabirds by limiting the transportation, importation, killing, or possession of those birds.

Clean Water Act of 1977, 33 USC 1251 et seq., requires a National Pollutant Discharge Elimination System (NPDES) permit for all discharges to reduce pollution that could affect any form of life. Section 404 of this act regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers.

Rivers and Harbors Act of 1899, sections 9 and 10, 33 USC section 1344, regulate all types of development in or over navigable water, including bridges, dams, dikes, piers, wharfs, booms, weirs, jetties, dredging, and filling by requiring a U.S. Army Corps of Engineers permit for such actions. Navigable waters are defined in title 33 CFR section 329 to include past, present, and potential future use in transporting commerce. Court decisions have expanded protection to estuaries and wetlands (Dederick 1984).

Executive Order 12088, Federal Compliance with Pollution Control Standards (1988), requires the head of each executive agency to be responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to federal facilities and activities under the control of the agency.

Executive Order 11990, Protection of Wetlands (1977), requires that governmental agencies, in carrying out their responsibilities, provide leadership and take actions to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Each agency is to consider factors relevant to a project proposal's effect on the survival and quality of the wetlands by maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, and wildlife. Agencies are required to provide for early public review of any plans or proposal for new construction in wetlands.

Executive Order 11988, Floodplain Management (1977), requires that governmental agencies, in carrying out their responsibilities, provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains. This order requires each federal agency to determine whether the project will occur in a floodplain and to consider alternatives. If no practical alternative is found, it requires minimizing harm and notifying the public why the project must be located in the floodplain, and it provides for public review and comment.

Fish and Wildlife Coordination Act (1934), 16 USC section 661 et seq., requires the U.S. Army Corps of Engineers to consult with the USFWS and state wildlife agency or agencies on all permit applications for projects in waterways or wetlands under Corps jurisdiction.

Federal Cave Resources Protection Act of 1988, requires protection of significant caves on federal land and protects the flora and fauna within the caves. It establishes civil and criminal penalties for damaging or disturbing significant caves.

BLM Manual Chapter 6840, U.S.D.I. Bureau of Land Management. It is policy of the BLM to conserve threatened and endangered species and ecosystems they depend upon primarily by prescribing management for conservation of lands these species inhabit. Similarly, it is policy to manage candidate species and their habitats to ensure that their actions do not contribute to the need to list any candidate species as threatened or endangered. It is also the policy to carry out management plans for the conservation of state-listed plants and animals. The State Director is to develop policies that will assist the state in achieving their management objectives for those species.

Fish and Wildlife Conservation Act (1980) promotes state programs to conserve, restore, and benefit non-game fish and wildlife and their habitat.

Bald Eagle Protection Act, 16 U.S.C. 668-668d, addresses the protection of bald and golden eagles with criminal penalties.

AFI 32-7064 Integrated Natural Resources Management. Implements Air Force Policy Directive 32-70, *Environmental Quality*. This instruction explains how to manage natural resources on Air Force property in compliance with Federal, state, and local standards in the United States and U.S. territories and possessions.

Idaho State Laws and Regulations

Idaho Code Section 18-3913 gives the Department of Parks and Recreation the authority to establish and amend a list of plants in need of protection because they might possibly become extinct or they affect the scenic beauty of public roads or public land.

Idaho Code Section 36-103 mandates the Department of Fish and Game to preserve, protect, perpetuate, and manage all wildlife. All wildlife is considered property of the state, and their capture and take are regulated by the Department. The Department has regulations that classify wildlife into the following categories: game animals, game birds, game fish, fur-bearing animals, migratory birds, threatened or endangered wildlife, protected nongame species, unprotected wildlife species, and predatory species. In addition, the Department maintains a list of Species of Special Concern (Moseley and Groves 1992).

CULTURAL RESOURCES

National Historic Preservation Act of 1966. Establishes National Register of Historic Places; defines Section 106 process requiring federal agencies to consider effects of an action on cultural resources on or eligible for the National Register.

Protection of Historic and Cultural Properties, 36 CFR section 800 (1986), provides an explicit set of procedures for federal agencies to meet their obligations under the National Historic Preservation Act and Executive Order 11593.

Native American Graves Protection and Repatriation Act (1990), 25 USC 3001-3013, requires protection and repatriation of Native American cultural items found on, or taken from

federal or tribal lands, and requires repatriation of cultural items controlled by federal agencies or museums receiving federal funds.

Archaeological Resources Protection Act of 1979, 16 USC section 470aa-47011, ensures the protection and preservation of archaeological sites on federal or Native American lands.

American Indian Religious Freedom Act (1978), 42 USC section 1996, states that it is the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

Executive Order 13007 (1996) directs agencies responsible for managing federal lands to, "(1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites." The order also requires that reasonable notice is given for proposed actions or policies potentially restricting access to, or adversely affecting sacred sites.

Executive Order 11593 (1971) directs land-holding federal agencies to identify and nominate historic properties to the National Register and requires that these agencies should avoid damaging historic properties that might be eligible for the National Register.

Memorandum for the Heads of Executive Departments and Agencies regarding Government-to-Government Relations with Native American Tribal Governments. This memorandum directs each executive department and agency to: operate within a government-to-government relationship with federally recognized tribal government; consult with tribal governments prior to taking actions affecting such governments; and assess the impact of plans, projects, programs and activities on tribal trust resources and assure that tribal rights are considered during consideration of such plans, projects, and programs.

AF Manual 126-5, Natural Resources, Outdoor Recreation, and Cultural Values, provides guidance, standards, and technical information on management of natural resources, outdoor recreational resources, and cultural resources.

AF Policy Letter, 4 January 1982, establishes that it is Air Force policy to comply with historic preservation and other federal environmental laws and directives, including the Historic Sites Act of 1935; the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969; the Archaeological and Historic Preservation Act of 1974; the Archaeological Resources Protection Act of 1979; and Executive Order 11593.

AFI 32-7065 Cultural Resources Management. Implements Air Force Policy Directive 32-70, *Environmental Quality*. This instruction sets guidelines for protecting and managing cultural resources in the United States and U.S. territories and possessions.

LAND USE

Resource Management Planning, 43 CFR 1600 series (1992), provides "a process for the development, approval, maintenance, amendment and revision of resource management plans and the use of existing plans for public lands administered by the BLM," under the authority of FLPMA (1976).

Land and Interest Exchange, 43 CFR 2200 series, "sets forth procedures for the exchange of public lands or interest," in public lands, for non-federal lands and interests in those lands.

Use; Rights-of-Way, 43 CFR 2800 series, establishes procedure for reviewing and processing permits and applications concerning the granting of rights-of-way involving public lands.

Grazing Administration-Exclusive of Alaska, 43 CFR 4100 series, provides "uniform guidance for administration of grazing on the public lands" (exclusive of Alaska).

Wilderness Act of 1964 requires a wilderness review of roadless areas to determine suitability for designation by Congress as a Wilderness Area.

Engle Act of 1958 (43 USC 155 et seq.) requires an Act of Congress to withdraw more than 5,000 acres for any one project planned by the DOD.

National Wild and Scenic Rivers Act of 1968 defines wild, scenic, and recreational rivers, designates a river classification, and establishes limits to development on shoreland area.

Owyhee County Comprehensive Plan (1980) contains an inventory of the environmental and socioeconomic resources of the county and establishes goals and objectives for the county's growth and development.

RECREATION/VISUAL

Recreation Management, 43 CFR 8300 series, "sets forth procedure and practices for the management and use of public lands for specific kinds of public recreation activities, resource conditions, outdoor recreation occupancy, and resource development." Guidelines are also provided regarding access to public lands and limitations on travel across public lands.

Idaho Recreation 2000 Implementation Plan (1989) contains BLM management plans and objectives to protect and enhance the recreation resources of Idaho's public lands.

National Wild and Scenic Rivers Act of 1968 defines wild, scenic, and recreational rivers, designates a river classification, and establishes limits to development on shoreland areas.

Wilderness Act of 1964 requires a wilderness review of roadless areas to determine suitability for designation by Congress as a Wilderness Area.

BLM Recreation Opportunity Spectrum (1986) provides a framework to assess and manage the recreation resource of an area.

BLM Visual Resource Management Policy and Guidelines for Lands under Wilderness Review guides assessment and documentation for BLM lands under wilderness review.

TRANSPORTATION

Policy on Design of Urban Highways and Streets. American Association of State Highway and Transportation Officials. 1990.

Manual on Uniform Traffic Control Devices and Arterial Streets and Highways. AASHTO. 1988.

Highway Capacity Manual. Transportation Research Board. 1985.

WITHDRAWAL LAWS AND REGULATIONS

AFI 32-7061 Environmental Impact Analysis Process

Engle Act (43 USC 155 et seq.)

Bureau of Land Management Land Withdrawal Regulations 43 CFR Ch. 11 (10-10-92 Edition)

BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 32-7061
24 JANUARY 1995



Civil Engineering

THE ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This instruction implements Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*. It describes specific tasks and procedures for the Air Force Environmental Impact Analysis Process (EIAP). To ensure a full understanding of the EIAP and terms used, users of this instruction should familiarize themselves with the *National Environmental Policy Act of 1969* (NEPA), Executive Order 12114, and their implementing regulations.

SUMMARY OF REVISIONS

This is the initial publication of AFI 32-7061.

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Supersedes AFRs 19-2, 10 August 1982; and
19-3, 23 September 1981.
OPR: HQ USAF/CEVP (Mr Kenneth L. Reinertson)

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Chapter 1

HOW TO USE THIS INSTRUCTION

1.1. Background. This instruction implements the Air Force Environmental Impact Analysis Process and provides procedures for environmental impact analysis both within the United States and abroad. Because the authority for, and rules governing, each aspect of the Environmental Impact Analysis Process differ depending on whether the action takes place in the United States or outside the United States, this instruction provides largely separate procedures for each type of action. Consequently, the main body of this instruction deals primarily with environmental impact analysis under the authority of the *National Environmental Policy Act of 1969* (NEPA) (Public Law 91-190, 42 U.S.C. §§4321-4347), while the primary procedures for environmental impact analysis of actions outside the United States in accordance with Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions*, are contained in Chapter 5.

1.1.1. The procedures in this instruction are essential to achieve and maintain compliance with NEPA and the *Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA* (40 CFR Parts 1500-1508, referred to as the "CEQ Regulations"). Further requirements are contained in 32 CFR Part 188, Department of Defense Directive (DoDD) 6050.1, *Environmental Effects in the United States of*

DoD Actions, July 30, 1979, and DoD Instruction 5000.2, *Defense Acquisition Management Policies and Procedures*, February 23, 1991, with Change 1, and Air Force Supplement 1, *Acquisition Management Policies*, 31 August 1993, with Change 1. To comply with NEPA and complete the EIAP, the CEQ Regulations and this instruction must be used together.

1.1.2. Air Force activities abroad will comply with this instruction, Executive Order 12114, and DoDD 6050.7, *Environmental Effects Abroad of Major Department of Defense Actions*, March 31, 1979. To comply with Executive Order 12114 and complete the EIAP, the Executive Order, DoDD 6050.7, and this instruction must be used together.

1.1.3. Attachment 1 is a glossary of references, abbreviations, acronyms, and terms. Refer to 40 CFR Part 1508 for other terminology used in this instruction.

1.2. Concept:

1.2.1. This instruction provides a framework on how to comply with NEPA and Executive Order 12114 according to AFPD 32-70.

1.2.2. Major commands (MAJCOM) provide additional implementing guidance in their supplemental publications to this instruction. MAJCOM supplements must identify the specific offices that have implementation

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responsibility and include any guidance needed to comply with this instruction. All references to MAJCOMs in this instruction include the Air National Guard Readiness Center (ANGRC) and other agencies designated as "MAJCOM equivalent" by HQ USAF.

1.3. Responsibilities:

1.3.1. Office of the Secretary of the Air Force:

1.3.1.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations and Environment (SAF/MI):

- Promulgates and oversees policy to ensure integration of environmental considerations.
- Determines the level of environmental analysis required for especially important, visible, or controversial Air Force proposals and approves selected Environmental Assessments (EA) and Findings of No Significant Impact (FONSI).
- Is the liaison on environmental matters with Federal agencies and national-level public interest organizations.
- Is the approval authority for all Environmental Impact Statements (EIS) prepared for Air Force actions, whether classified or unclassified.

1.3.1.2. The General Counsel (SAF/GC). Provides final legal advice to SAF/MI, HQ USAF, and HQ USAF Environmental Protection Committee (EPC) on EIAP questions.

1.3.1.3. Office of Legislative Liaison (SAF/LL):

- Distributes draft and final EISs to congressional delegations.
- Reviews and provides the Office of the Secretary of Defense (OSD) with analyses of the Air Force position on proposed and enrolled legislation and executive department testimony dealing with EIAP issues.

1.3.1.4. Office of Public Affairs (SAF/PA):

- Reviews environmental documents requiring Office of the Secretary of the Air Force approval prior to public release.
- Assists the environmental planning function and the Air Force Legal Services Agency, Trial Judiciary Division (AFLSA/TJTD), in planning and conducting public scoping meetings and hearings.
- Ensures that public affairs aspects of all EIAP actions are conducted in accordance with this instruction and AFI 35-202, *Environmental Community Involvement*.
- The National Guard Bureau, Office of Public Affairs (NGB-PA), will assume the responsibilities of SAF/PA for the EIAP involving the National Guard Bureau, Air Directorate.

1.3.2. Headquarters US Air Force (HQ USAF). The Civil Engineer (HQ USAF/CE) formulates and oversees

execution of EIAP policy. The National Guard Bureau Air Directorate (NGB-CF) oversees the EIAP for Air National Guard actions.

1.3.3. MAJCOMs, Air Force Reserve (AFRES), ANG, and Field Operating Agencies (FOA). These organizations establish procedures that comply with this instruction wherever they are the host unit for preparing and using required environmental documentation in making decisions about proposed actions and programs within their commands.

1.3.3.1. Air Force Center for Environmental Excellence (AFCEE). The AFCEE Environmental Conservation and Planning Directorate (AFCEE/EC) provides technical assistance to major commands and the Air Force Base Conversion Agency.

1.3.3.2. Air Force Regional Compliance Offices (RCO). RCOs review other agency environmental documents that may have an impact on the Air Force. Requests for review of such documents should be directed to the proper RCO (Atlanta, Dallas, or San Francisco) along with any relevant comments. The RCO:

- Notifies the proponent, after receipt, that the RCO is the single point of contact for the Air Force review of the document.
- Requests comments from potentially affected installations, MAJCOMs, the ANG, and HQ USAF, as required.
- Consolidates comments into the Air Force official response and submits the final response to the proponent.
- Provides to HQ USAF, the appropriate MAJCOMs and installations a copy of the final response and a complete set of all review comments.

1.3.3.3. Headquarters Air Force Materiel Command (HQ AFMC). HQ AFMC is responsible for applying EIAP to all proposed Air Force weapons systems and modifications to existing systems. These documents may be used as a basis for tiering documents in subsequent system beddown environmental analyses (see paragraph 2.7). HQ AFMC ensures that:

- Environmental documents for acquisition of systems required for Defense Acquisition Board (DAB) decisions are completed prior to DAB milestone decisions.
- Detailed guidance on the EIAP for acquisition programs, contained in DoD Instruction 5000.2, with Change 1 (part 6, section I) and Air Force Supplement 1, with Change 1; DoD Manual 5000.2-M, *Defense Acquisition Management Documentation and Reports*, February 1991, with Change 1 (part 4, section F, *Integrated Program Summary*), is complied with or is followed. Analysis requirements in this instruction apply where the Air Force is the sole acquisition agent or the lead service for joint programs.

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- ELAP studies involving real property, facilities, personnel, and training to support acquisition programs are coordinated through the HQ AFMC environmental planning function.

1.3.4. **Environmental Planning Function (EPF).** The EPF is the interdisciplinary staff, at any level of command, responsible for the ELAP. The EPF:

- Assists the proponent in preparing a Description of Proposed Action and Alternatives (DOPAA) and actively supports the proponent during all phases of the ELAP.
- Evaluates proposed actions and completes Sections II and III of AF Form 813, Request for Environmental Impact Analysis, subsequent to submission by the proponent and determines whether a Categorical Exclusion (CATEX) applies. The EPF responsible official signs the AF Form 813 certification.
- Identifies and documents, with technical advice from the bioenvironmental engineer and other staff members, environmental quality standards that relate to the action under evaluation.
- Prepares environmental documents, or obtains technical assistance through Air Force channels or contract support and adopts the documents as official Air Force papers when completed and approved.
- Ensures the ELAP is conducted on base- and MAJCOM-level plans, including contingency plans for the training, movement, and operations of Air Force personnel and equipment.
- Prepares the Notice of Intent (NOI) to prepare an EIS with assistance from the proponent and the Public Affairs Office.
- Prepares applicable portions of the Certificate of Compliance for each military construction project according to AFI 32-1021, *Planning and Programming of Facility Construction Projects*.

1.3.5. **Proponent.** Each office, unit, or activity at any level that initiates Air Force actions is responsible for:

- Notifying the EPF of a pending action and completing Section I of the AF Form 813, including a DOPAA, for submittal to the EPF.
- Identifying key decision points and coordinating with the EPF on ELAP phasing to ensure that environmental documents are available to the decision-maker before the final decision is made and ensuring that, until the ELAP is complete, resources are not committed prejudicing the selection of alternatives nor actions taken having an adverse environmental impact or limiting the choice of reasonable alternatives.
- Integrating the ELAP into the planning stages of a proposed program or action and, with the EPF, determining as early as possible whether to prepare an EIS.

- Presenting the DOPAA to the EPC for review and comment.
- Coordinating with the EPF prior to organizing public or interagency meetings which deal with ELAP elements of a proposed action and involving persons or agencies outside the Air Force.
- Subsequent to the decision to prepare an EIS, assisting the EPF and Public Affairs Office in preparing a draft NOI to prepare an EIS. All NOIs must be forwarded to HQ USAF/CEV for review and publication in the *Federal Register*.

1.3.6. **Environmental Protection Committee (EPC).** The EPC helps commanders assess, review and approve ELAP documents.

1.3.7. **Staff Judge Advocate (SJA).** The Staff Judge Advocate:

- Advises the command-level proponent EPF and EPC on CATEX determinations and the legal sufficiency of environmental documents.
- Advises the EPF during the scoping process of issues that should be addressed in EISs and on procedures for the conduct of public hearings.
- Coordinates the appointment of the independent hearing officer with AFLSA/JAJT (or NGB-JA) and provides support for the hearing officer in cases of public hearings on the draft EIS. The proponent pays administrative and TDY costs. The hearing officer presides at hearings and makes final decisions regarding hearing procedures, with concurrence from HQ USAF/CEV (or ANGRC/CEV).
- Promptly refers all matters causing or likely to cause substantial public controversy or litigation through channels to AFLSA/JACE (or NGB-JA).

1.3.8. **Public Affairs Officer.** This officer:

- Advises the EPF, the EPC, and the proponent on public affairs implications of proposed actions and reviews environmental documents for public affairs issues.
- Advises the EPF during the scoping process of issues that should be addressed in the EIS.
- Prepares, coordinates, and distributes news releases related to the proposal and associated ELAP documents.
- Notifies the media (television, radio, newspaper) and purchases advertisements when newspapers will not run notices free of charge.
- For more comprehensive instructions about public affairs activities in environmental matters, see AFI 35-202.

1.3.9. **Medical Service.** The Medical Service, represented by the bioenvironmental engineer, provides technical assistance to EPFs in the areas of environmental health standards, environmental effects, and environmental monitoring capabilities. The Air Force

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Armstrong Laboratory, Occupational and Environmental Health Directorate, provides additional technical support.

1.3.10. **Safety Office.** The Safety Office provides technical assistance to EPFs to ensure consideration of safety standards and requirements.

Chapter 2

GENERAL COMPLIANCE REQUIREMENTS

2.1. **Initial Considerations.** Air Force personnel will:

2.1.1. Consider and document environmental effects of proposed Air Force actions through AF Forms 813, EAs, FONSI's, EISs, EIS Records of Decision (ROD), and documents prepared according to Executive Order (E.O.) 12114.

2.1.2. Evaluate proposed actions for possible categorical exclusion (CATEX) from environmental impact analysis (attachment 2). CATEXs may apply to actions in the United States, its territories and possessions, and abroad.

2.1.3. Make environmental documents, comments, and responses, including those of other Federal, state, and local agencies and the public, part of the record available for review and use at all levels of decision making.

2.1.4. Review the specific alternatives analyzed in the EIAP when evaluating the proposal prior to decision making.

2.1.5. Ensure that alternatives considered by the decision-maker are both reasonable and within the range of alternatives analyzed in the environmental documents.

2.1.6. Pursue the objective of furthering foreign policy and national security interests while at the same time considering important environmental factors.

2.1.7. Consider the environmental effects of actions that affect the global commons.

2.1.8. Carry out actions that affect the environment of a foreign nation in a way that allows consideration of the environment, existing international agreements, and the sovereignty of other nations.

2.1.9. Determine whether any foreign government should be informed of the availability of environmental documents. Formal arrangements with foreign governments concerning environmental matters and communications with foreign governments concerning environmental agreements will be coordinated with the Department of State by the Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health (SAF/MIQ) through the Assistant Secretary of Defense. This coordination requirement does not apply to informal working-level communications and arrangements.

2.2. **Organizational Relationships.** The host EPF manages the EIAP using an interdisciplinary team approach. This is especially important for tenant-proposed actions, because the host command is

responsible for the EIAP for actions related to the host command's installations.

2.2.1. The host command prepares environmental documents internally or directs the host base to prepare the environmental documents. Environmental document preparation may be by contract (requiring the tenant to fund the EIAP), or by the tenant unit. Regardless of the preparation method, the host command will ensure the required environmental analysis is accomplished before a decision is made on the proposal and an action is undertaken. Host/tenant agreements should provide specific procedures to ensure host oversight of tenant compliance.

2.2.2. For aircraft beddown and unit realignment actions, program elements are identified in the Program Objective Memorandum. Subsequent Program Change Requests must include AF Form 813. When a program for a given year has sufficient support, HQ USAF/XOO notifies the host command or NGB-XO to initiate the EIAP. For classified actions, MAJCOMs and ANG begin reporting monthly EIAP status to HQ USAF/XO (copy to SAF/MIQ and HQ USAF/CEV) while the proposal is still classified, and upon declassification, to HQ USAF/CEV. MAJCOMs and ANG continue reporting until the EIAP is complete for all projects.

2.2.3. To ensure timely initiation of the EIAP, SAF/AQ forwards information copies of all Mission Need Statements and System Operational Requirements Documents to SAF/MIQ, HQ USAF/CEV (or ANGRC/CEV), the Air Force Medical Operations Agency, Aerospace Medicine Office (AFMOA/SG), and the affected MAJCOM EPFs.

2.2.4. The MAJCOM of the scheduling unit managing affected airspace is responsible for preparing and approving environmental analyses. The scheduling unit's higher headquarters may choose whether to prepare the environmental document, but is ultimately responsible for EIAP document accomplishment and approval.

2.3. **Budgeting and Funding.** Contract EIAP efforts are proponent MAJCOM responsibilities. Each year, the EPF budgets for the anticipated EIAP workload based on reports of command proponents. If proponent offices exceed the budget in a given year or identify unforeseen requirements, the proponent offices must provide the remaining funding. For HQ AFMC, the system program

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office or project office budgets and funds EIAP efforts relating to research, development, testing, and evaluation activities.

2.4. Requests From Non-Air Force Agencies or Entities. Non-Air Force agencies or entities may request the Air Force to undertake an action, such as issuing a permit or outleasing Air Force property, that may primarily benefit the requester or an agency other than the Air Force. The EPF and other Air Force staff elements must identify such requests and coordinate with the proponent of the non-Air Force proposal, as well as with concerned state, local, and tribal authorities.

2.4.1. Air Force decisions on such proposals must take into consideration the potential environmental impacts of the applicant's proposed activity (as described in an Air Force environmental document), insofar as the proposed action involves Air Force property or programs, or requires Air Force approval.

2.4.2. The Air Force may require the requester to prepare, at the requester's expense, an analysis of environmental impacts (40 CFR §1506.5), or the requester may be required to pay for an EA or EIS to be prepared by a contractor selected and supervised by the Air Force. The EPF may permit requesters to submit draft EAs for their proposed actions, except for actions described in paragraphs 3.5.1 or 3.5.2, or for actions the EPF has reason to believe will ultimately require an EIS. For EISs, the EPF has the responsibility to prepare the environmental document, although responsibility for funding remains with the requester. The fact that the requester has prepared environmental documents at its own expense does not commit the Air Force to allow or undertake the proposed action or its alternatives. The requester is not entitled to any preference over other potential parties with whom the Air Force might contract or make similar arrangements.

2.4.3. In no event is the requester who prepares or funds an environmental analysis entitled to reimbursement from the Air Force. When requesters prepare environmental documents outside the Air Force, the Air Force must independently evaluate and approve the scope and content of the environmental analyses before using the analyses to fulfill EIAP requirements. Any outside environmental analysis must evaluate reasonable alternatives as defined in paragraph 2.5.

2.5. Analysis of Alternatives. The Air Force must analyze reasonable alternatives to the proposed action and the "no action" alternative in all EAs and EISs, as fully as the proposed action alternative.

2.5.1. "Reasonable" alternatives are those that meet the underlying purpose and need for the proposed action and that would cause a reasonable person to inquire further before choosing a particular course of action. Reasonable alternatives are not limited to those directly within the

power of the Air Force to implement. They may involve another government agency or military service to assist in the project or even to become the lead agency. The Air Force must also consider reasonable alternatives raised during the scoping process (see paragraph 3.7) or suggested by others, as well as combinations of alternatives. The Air Force need not analyze highly speculative alternatives, such as those requiring a major, unlikely change in law or governmental policy. If the Air Force identifies a large number of reasonable alternatives, it may limit alternatives selected for detailed environmental analysis to a reasonable range or to a reasonable number of examples covering the full spectrum of alternatives.

2.5.2. The Air Force may expressly eliminate alternatives from detailed analysis, based on reasonable selection standards (for example, operational, technical, or environmental standards suitable to a particular project). Proponents may develop written selection standards to firmly establish what is a "reasonable" alternative for a particular project, but they must not so narrowly define these standards that they unnecessarily limit consideration to the proposal initially favored by proponents. This discussion of reasonable alternatives applies equally to EAs and EISs.

2.5.3. Except where excused by law, the Air Force must always consider and assess the environmental impacts of the "no action" alternative. "No action" may mean either that current management practice will not change or that the proposed action will not take place. If no action would result in other predictable actions, those actions should be discussed within the no action alternative section. The discussion of the no action alternative and the other alternatives should be comparable in detail to that of the proposed action.

2.6. Cooperation and Adoption:

2.6.1. Lead and Cooperating Agency (40 CFR §§1501.5-1501.6). When the Air Force is a cooperating agency in the preparation of an EIS, the Air Force reviews and approves principal environmental documents within the EIAP as if they were prepared by the Air Force. The Air Force executes a Record of Decision for its program decisions that are based on an EIS for which the Air Force is a cooperating agency. The Air Force may also be a lead or cooperating agency on an EA using similar procedures, but the MAJCOM EPC retains approval authority unless otherwise directed by HQ USAF. Before invoking provisions of 40 CFR §1501.5(e), the lowest authority level possible resolves disputes concerning which agency is the lead or cooperating agency.

2.6.2. Adoption of EA or EIS. The Air Force, even though not a cooperating agency, may adopt an EA or EIS prepared by another entity where the proposed action is substantially the same as the action described in the EA or EIS. In this case, the EA or EIS must be recirculated as a

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final EA or EIS but the Air Force must independently review the EA or EIS and determine that it is current and that it satisfies the requirements of this instruction. The Air Force then prepares its own FONSI or ROD, as the case may be. In the situation where the proposed action is not substantially the same as that described in the EA or the EIS, the Air Force may adopt the EA or EIS, or a portion thereof, by circulating the EA or EIS as a draft and then preparing the final EA or EIS.

2.7. Tiering. The Air Force should use tiered (40 CFR §1502.20) environmental documents, and environmental documents prepared by other agencies, to eliminate repetitive discussions of the same issues and to focus on the issues relating to specific actions. If the Air Force adopts another Federal agency's environmental document,

subsequent Air Force environmental documents may also be tiered.

2.8. Combining EIAP With Other Documentation:

2.8.1. The EPF combines environmental analysis with other related documentation when practicable (40 CFR §1506.4) following the procedures prescribed by the CEQ Regulations and this instruction.

2.8.2. The EPF must integrate comprehensive planning (AFI 32-7062, *Air Force Comprehensive Planning*) with the requirements of NEPA and the EIAP. Prior to making a decision to proceed, the EPF must analyze the environmental impacts that could result from implementation of a proposal identified in the comprehensive plan.

Chapter 3

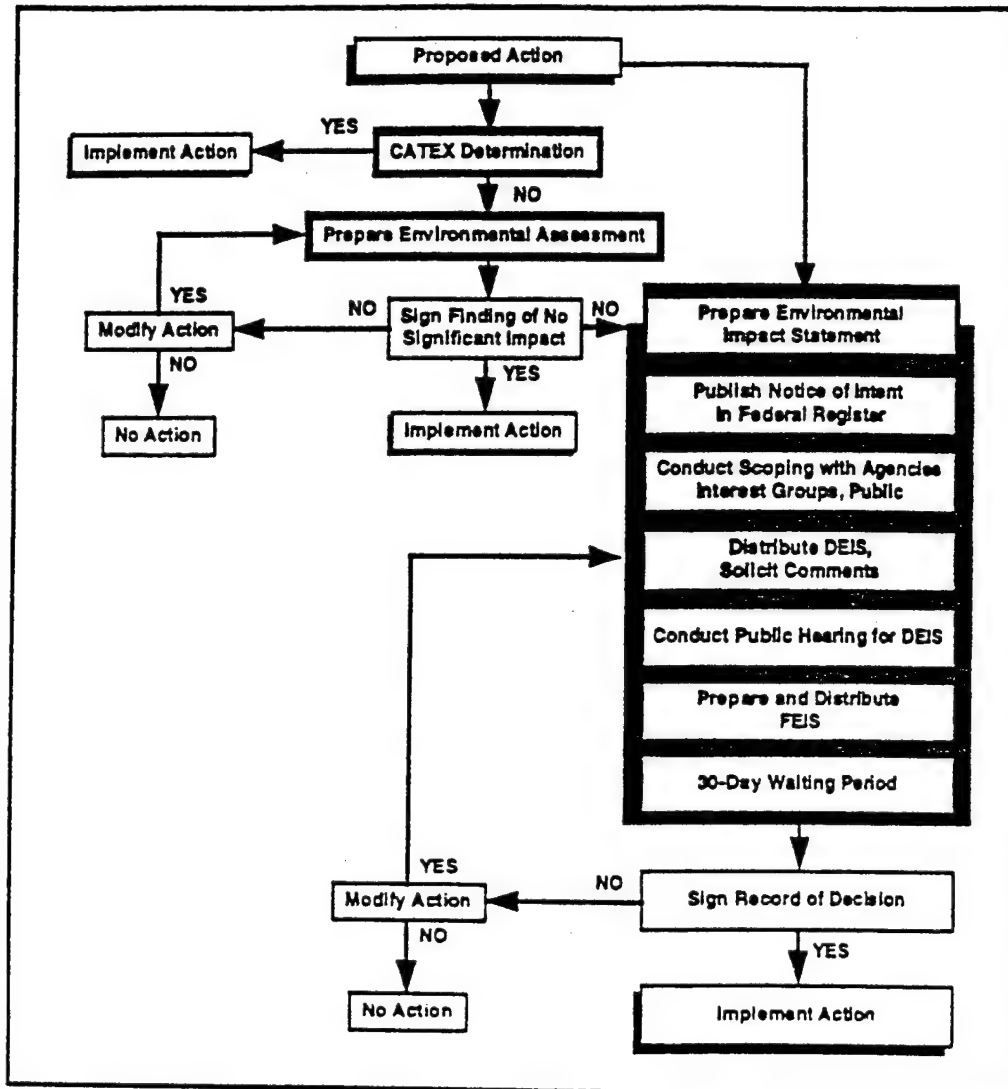
PREPARING AND PROCESSING ENVIRONMENTAL DOCUMENTS

3.1. AF Form 813, Request for Environmental Impact Analysis. The Air Force uses AF Form 813 to document the need for environmental analysis or for certain CATEX determinations for proposed actions. The form helps narrow and focus the issues to potential environmental

impacts. AF Form 813 must be retained with the EA or EIS to record the focusing of environmental issues. The rationale for not addressing environmental issues must also be recorded in the EA or EIS. Figure 3.1 illustrates the Environmental Impact Analysis Process.

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Figure 3.1. Environmental Impact Analysis Process.

**3.2. Categorical Exclusion:**

3.2.1. CATEXs apply to those classes of actions that do not individually or cumulatively have potential for significant effect on the environment and do not, therefore, require further environmental analysis in an EA or an EIS. The list of Air Force-approved CATEXs is in attachment 2. Command supplements to this instruction may not add CATEXs or expand the scope of the CATEXs in attachment 2.

3.2.2. Characteristics of categories of actions that usually do not require either an EIS or an EA (in the absence of extraordinary circumstances) include:

- Minimal adverse effect on environmental quality.
- No significant change to existing environmental conditions.
- No significant cumulative environmental impact.
- Socioeconomic effects only.
- Similarity to actions previously assessed and found to have no significant environmental impacts.

3.2.3. CATEXs apply to actions in the United States and abroad. General exemptions specific to actions abroad are in DoDD 6050.7. The EPF or other decision-maker forwards requests for additional exemption determinations

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for actions abroad to HQ USAF/CEV with a justification letter.

3.2.4. Normally, any decisionmaking level may determine the applicability of a CATEX and need not formally record the determination on AF Form 813 or elsewhere, except as noted in the CATEX list.

3.2.5. Application of a CATEX to an action does not eliminate the need to meet air conformity requirements (see paragraph 4.6).

3.3. Environmental Assessment:

3.3.1. When a proposed action is one not usually requiring an EIS but is not categorically excluded, the EPF must prepare an EA (40 CFR §1508.9). Every EA must lead to either a FONSI, a decision to prepare an EIS, or no decision on the proposal.

3.3.2. Whenever a proposed action usually requires an EIS, the EPF responsible for the EIAP may prepare an EA to definitively determine if an EIS is required based on the analysis of environmental impacts. Alternatively, the EPF may choose to bypass the EA and proceed with preparation of an EIS.

3.3.3. An EA is a written analysis that:

- Provides analysis sufficient to determine whether to prepare an EIS or a FONSI.
- Aids the Air Force in complying with the NEPA when no EIS is required.

3.3.4. An EA discusses the need for the proposed action, reasonable alternatives to the proposed action, the affected environment, the environmental impacts of the proposed action, and alternatives (including the "no action" alternative), and a listing of agencies and persons consulted during preparation.

3.3.5. The format for the EA is the same as the EIS. The alternatives section of an EA and an EIS are similar and should follow the alternatives analysis guidance outlined in paragraph 2.5.

3.3.6. The EPF should design the EA to facilitate rapidly transforming the document into an EIS if the environmental analysis reveals a significant impact.

3.3.7. Certain EAs require SAF/MIQ approval because they involve topics of special importance or interest. Unless directed otherwise by SAF/MIQ, the EPF must forward the following types of EAs to SAF/MIQ through HQ USAF/CEV (copy to AFCEE/EC for technical review), along with an unsigned FONSI:

- EAs for actions where the Air Force has wetlands or floodplains compliance responsibilities (E.O. 11988 and E.O. 11990). A Finding of No Practicable Alternative (FONPA) must be submitted to HQ USAF/CEV when the alternative selected is located in wetlands or floodplains, and must discuss why no other practicable alternative exists to avoid impacts. See AFI 32-7064, *Integrated Resources Management*.

- System acquisition EAs.
- All EAs on non-Air Force agency proposals that require an Air Force decision, such as use of Air Force property for highways and joint-use proposals.
- EAs for actions that require the Air Force to make conformity determinations pursuant to the Clean Air Act, as amended, and the implementing rules. Conformity determinations are made by SAF/MIQ, see paragraph 4.6.
- EAs where mitigation to insignificance is accomplished in lieu of initiating an EIS (paragraph 3.11.3.).

3.3.8. A few examples of actions that normally require preparation of an EA (except as indicated in the CATEX list) include:

- Public land withdrawals of less than 5,000 acres.
- Minor mission realignments and aircraft beddowns.
- Building construction on base within developed areas.
- Minor modifications to Military Operating Areas (MOA), air-to-ground weapons ranges, and military training routes.
- Remediation of hazardous waste disposal sites.

3.3.9. Abbreviated Environmental Assessment. In special circumstances, when the potential environmental impacts of a proposed action are clearly insignificant (as documented on AF Form 813) and none of the CATEXs in attachment 2 apply, the EPF can use an abbreviated EA to assess the action. At a minimum, the abbreviated EA will consist of:

- AF Form 813 with attachments analyzing the environmental impacts of the proposed action and reasonable alternatives.
- A concise description of the affected environment.
- A concise FONSI (see paragraph 3.4).

3.3.10. The Air Force should involve environmental agencies, applicants, and the public in the preparation of EAs (40 CFR §1501.4(b)). The extent of involvement usually coincides with the magnitude and complexity of the proposed action and its potential environmental effect on the area. For proposed actions described in paragraph 3.4.5.2, use either the scoping process described in paragraph 3.7 or the public notice process in paragraphs 4.1.2 and 4.1.3.

3.4. Finding of No Significant Impact:

3.4.1. The FONSI (40 CFR §1508.13) briefly describes why an action would not have a significant effect on the environment and thus will not be the subject of an EIS. The FONSI must summarize the EA or, preferably, have it attached and incorporated by reference, and must note any other environmental documents related to the action.

3.4.2. If the EA is not attached, the FONSI must include:

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- Name of the action.
- Brief description of the action (including alternatives considered and the chosen alternative).
- Brief discussion of anticipated environmental effects.
- Conclusions leading to the FONSI.
- All mitigation actions that will be adopted with implementation of the proposal (see paragraph 3.11).

3.4.3. Keep FONSI as brief as possible. Most FONSI should not exceed two typewritten pages. Stand-alone FONSI without an attached EA may be longer.

3.4.4. For actions of regional or local interest, disseminate the FONSI according to paragraph 4.1. The MAJCOM and NGB are responsible for release of FONSI to regional offices of Federal agencies, the state single point of contact (SPOC), and state agencies concurrent with local release by the installations.

3.4.5. The EPF must provide the FONSI and complete EA to organizations and individuals requesting them and to whomever the proponent or the EPF has reason to believe is interested in the action. The EPF provides a copy of the documents without cost to organizations and individuals requesting them. The earliest of the FONSI transmittal date (date of letter of transmittal) to the SPOC or other interested party is the official notification date.

3.4.5.1. The EPF must make the draft EA/FONSI available to the affected public unless disclosure is precluded for security classification reasons. Before the FONSI is signed and the action is implemented, the EPF should allow sufficient time to receive comments from the public. The time period will reflect the magnitude of the proposed action and its potential for controversy. The greater the magnitude of the proposed action or its potential for controversy, the longer the time that must be allowed for public review. Mandatory review periods for certain defined actions are contained in paragraph 3.4.5.2. These are not all inclusive but merely specific examples. In every case where an EA/FONSI is prepared, the proponent and EPF must determine how much time will be allowed for public review. In all cases, other than classified actions, a public review period should be the norm unless clearly unnecessary due to the lack of potential controversy.

3.4.5.2. In the following circumstances, the EA and draft FONSI are made available for public review for at least 30 days before FONSI approval and implementing the action (40 CFR §1501.4(e)(2)):

- When the proposed action is, or is closely similar to, one that usually requires preparation of an EIS (see paragraph 3.5).
- If it is an unusual case, a new kind of action, or a precedent-setting case in terms of its potential environmental impacts.

- If the proposed action would be located in a floodplain or wetland.
- If the action is mitigated to insignificance in the FONSI, in lieu of an EIS (paragraph 3.11.3).
- If the proposed action is a change to airspace use or designation.

3.4.6. As a rule, the same organizational level that prepares the EA reviews and recommends the FONSI for approval by the EPC. MAJCOMs may decide the level of EA approval and FONSI signature, except as provided in paragraph 3.3.7.

3.4.7. Air Force staff must get permission to deviate from the procedures outlined in this instruction from SAF/MIQ in accordance with paragraph 4.8.

3.5. Environmental Impact Statement:

3.5.1. Certain classes of environmental impacts require preparation of an EIS (40 CFR Part 1502). These include, but are not limited to:

- Potential for significant degradation of the environment.
- Potential for significant threat or hazard to public health or safety.
- Substantial environmental controversy concerning the significance or nature of the environmental impact of a proposed action.

3.5.2. Certain other actions normally, but not always, require an EIS. These include, but are not limited to:

- Public land withdrawals of over 5,000 acres (Engle Act, 43 U.S.C. §§155-158).
- Establishment of new air-to-ground weapons ranges.
- Site selection of new airfields.
- Site selection of major installations.
- Development of major new weapons systems (at decision points that involve demonstration, validation, production, deployment, and area or site selection for deployment).
- Establishing or expanding supersonic training areas over land below 30,000 feet MSL (mean sea level).
- Disposal and reuse of closing installations.

3.6. Notice of Intent. The EPF must furnish to HQ USAF/CEV the NOI (40 CFR §1508.22) describing the proposed action for publication in the *Federal Register*. The EPF, through the host base public affairs office, will also provide the NOI to newspapers and other media in the area potentially affected by the proposed action. The EPF must provide copies of the notice to the proper state SPOC (E.O. 12372) and must also distribute it to requesting agencies, organizations, and individuals. Along with the draft NOI, the EPF must also forward the completed DOPAA to HQ USAF for review.

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3.7. **Scoping.** After publication of the NOI for an EIS, the EPF must initiate the public scoping process (40 CFR §1501.7) to determine the scope of issues to be addressed and to help identify significant environmental issues to be analyzed in depth. Methods of scoping range from soliciting written comments to conducting public scoping meetings (see 40 CFR §1501.7 and §1506.6(e)). The purpose of this process is to de-emphasize insignificant issues and focus the scope of the environmental analysis on significant issues (40 CFR §1500.4(g)). The result of scoping is that the proponent and EPF determine the range of actions, alternatives, and impacts to be considered in the EIS (40 CFR §1508.25). The EPF must send meeting plans for scoping meetings to AF/CEV (or ANGRC/CEV) for SAF/MIQ concurrence no later than 30 days before the first scoping meeting. Scoping meeting plans are similar in content to public hearing plans (see attachment 3).

3.8. Draft EIS:

3.8.1. **Preliminary Draft.** The EPF prepares a Preliminary Draft EIS (PDEIS) (40 CFR §1502.9) based on the scope of issues decided on during the scoping process. The format of the EIS must be in accordance with the format recommended in the CEQ Regulations (40 CFR §1502.10 and §1502.11). The CEQ Regulations indicate that EISs are normally fewer than 150 pages (300 pages for proposals of unusual complexity). The EPF provides a sufficient number of copies of the PDEIS to HQ USAF/CEV for HQ USAF EPC review and to AFCEE/EC for technical review.

3.8.2. **Review of Draft EIS.** After the HQ USAF EPC review, the EPF makes any necessary revisions to the PDEIS and forwards it to HQ USAF/CEV as a Draft EIS for security and policy review. Once the Draft EIS is approved, HQ USAF/CEV notifies the EPF to print sufficient copies of the Draft EIS for distribution to congressional delegations and interested agencies. After congressional distribution, the EPF sends the Draft EIS to all others on the distribution list. HQ USAF/CEV then files the document with the Environmental Protection Agency (EPA) and provides a copy to the Deputy Under Secretary of Defense for Environmental Security.

3.8.3. Public Review of Draft EIS (40 CFR §1502.19):

3.8.3.1. The public comment period for the Draft EIS is at least 45 days from the publication date of the notice of availability (NOA) of the Draft EIS in the *Federal Register*. EPA publishes in the *Federal Register*, each week, NOAs of EISs filed during the preceding week. This public comment period may be extended an additional 15 days, at the request of the EPF. If the Draft EIS is unusually long, the EPF may distribute a summary to the public with an attached list of locations (such as public libraries) where the entire Draft EIS may be reviewed. The EPF must distribute the full Draft EIS to certain entities, for example agencies with jurisdiction by

law or agencies with special expertise in evaluating the environmental impacts, and anyone else requesting the entire Draft EIS (40 CFR §1502.19).

3.8.3.2. The EPF holds public hearings on the Draft EIS according to the procedures in 40 CFR §1506.6(c) and (d). Hearings take place no sooner than 15 days after the *Federal Register* NOA and at least 15 days before the end of the comment period. Scheduling hearings toward the end of the comment period is encouraged to allow the public to obtain and more thoroughly review the Draft EIS. The EPF must provide hearing plans to HQ USAF/CEV (or ANGRC/CEV) for SAF/MIQ concurrence no later than 30 days prior to the first public hearing. See attachment 3 for public hearing procedures.

3.8.4. **Response to Comments (40 CFR §1503.4).** The EPF must incorporate its responses to comments in the Final EIS by either modifying the text and referring in the appendix to where the appropriate modification is addressed or providing a written explanation in the comments section, or both. The EPF may group comments of a similar nature together to allow a common response and may also respond to individuals separately.

3.8.5. **Seeking Additional Comments.** The EPF may, at any time during the EIS process, seek additional public comments, such as when there has been a significant change in circumstances, development of significant new information of a relevant nature, or where there is substantial environmental controversy concerning the proposed action. Significant new information leading to public controversy regarding the scope after the scoping process is such a changed circumstance. An additional public comment period may also be necessary after the publication of the Draft EIS due to public controversy or changes made as the result of previous public comments. Such periods when additional public comments are sought shall last for at least 30 days.

3.9. Final EIS:

3.9.1. If changes in the Draft EIS are minor or limited to factual corrections and responses to comments, the proponent may, with the prior approval of SAF/MIQ, prepare a document containing only Draft EIS comments, Air Force responses, and errata sheets of changes staffed to the HQ USAF EPC for coordination. However, the proponent must submit the Draft EIS and all of the above documents, with a new cover sheet indicating that it is a Final EIS (40 CFR §1503.4(c)), to HQ USAF/CEV for filing with the EPA (40 CFR §1506.9). If more extensive modifications are required, the EPF must prepare a Preliminary Final EIS incorporating these modifications for coordination within the Air Force. Regardless of which procedure is followed, the Final EIS must be processed in the same way as the Draft EIS, except that the public need not be invited to comment during the 30-day post-filing waiting period. The final EIS should be furnished to every person, organization, or agency that

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made substantive comments on the draft EIS or requested a copy. Although the EPF is not required to respond to public comments received during this period, comments received must be considered in determining final decisions such as identifying the preferred alternative, appropriate mitigations, or if a supplemental analysis is required.

3.9.2. The EPF processes all necessary supplements to EISs (40 CFR §1502.9) in the same way as the original draft and final EIS, except that a new scoping process is not required.

3.9.3. If major steps to advance the proposal have not occurred within 5 years from the date of the FEIS approval, reevaluation of the documentation should be accomplished to ensure its continued validity.

3.10. Record of Decision:

3.10.1. The MAJCOM prepares draft RODs, formally staffs them to HQ USAF/CEV for verification of adequacy, and forwards them to the final decision-maker for signature. A ROD (40 CFR §1505.2) is a concise public document stating what an agency's decision is on a specific action. The ROD may be integrated into any other document required to implement the agency's decision. A decision on a course of action may not be made until 30 days after publication of the NOA of the Final EIS in the *Federal Register*. EPA publishes NOAs each Friday; when Friday is a holiday, the notice is published on Thursday.

3.10.2. The Air Force must announce the ROD to the affected public as specified in paragraph 4.1, except for classified portions. The ROD should be concise and should explain the conclusion, the reason for the selection, and the alternatives considered. The ROD must identify the course of action (proposed action or an alternative) that is considered environmentally preferable regardless of whether it is the alternative selected for implementation. The ROD should summarize all the major factors the agency weighed in making its decision, including essential considerations of national policy.

3.10.3. The ROD must state whether the selected alternative employs all practicable means to avoid, minimize, or mitigate environmental impacts and, if not, explain why.

3.11. Mitigation:

3.11.1. When preparing ELAP documents, indicate clearly whether mitigation measures (40 CFR §1508.20) must be implemented for the alternative selected. Discuss mitigation measures in terms of "will" and "would" when such measures have already been incorporated into the proposal. Use terms like "may" and "could" when proposing or suggesting mitigation measures. Both the public and the Air Force community need to know what commitments are being considered and selected, and who will be responsible for implementing, funding, and monitoring the mitigation measures.

3.11.2. The proponent funds and implements mitigation measures in the mitigation plan that are approved by the decision-maker. Where possible and appropriate because of amount, the proponent should include the cost of mitigation as a line item in the budget for a proposed project. The proponent must keep the EPF informed of the status of mitigation measures when the proponent implements the action. The EPF monitors the progress of mitigation implementation and reports its status to HQ USAF/CEV on a periodic basis. Upon request, the EPF must also provide the results of relevant mitigation monitoring to the public.

3.11.3. The proponent may "mitigate to insignificance" potentially significant environmental impacts found during preparation of an EA, in lieu of preparing an EIS. The FONSI for the EA must include these mitigation measures. Such mitigations are legally binding and must be carried out as the proponent implements the project. If, for any reason, the project proponent later abandons or revises in environmentally-adverse ways the mitigation commitments made in the FONSI, the proponent must prepare a supplemental ELAP document before continuing the project. If potentially significant environmental impacts would result from any project revisions, the proponent must prepare an EIS.

3.11.4. For each FONSI or ROD containing mitigation measures, the proponent publishes a plan specifically identifying each mitigation, discussing how the proponent will execute the mitigations, identifying who will fund and implement the mitigations, and stating when the proponent will complete the mitigation. The mitigation plan will be forwarded to HQ USAF/CEV for review within 90 days from the date of signature of the FONSI or ROD.

Chapter 4

SPECIAL REQUIREMENTS

4.1. Public Notification. Except as provided in paragraph 4.3, public notification is required for various aspects of the ELAP.

4.1.1. Activities that require public notification include:

- The FONSI for an EA.
- An EIS NOI.
- Public scoping meetings.
- Availability of the Draft EIS.

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- Public hearings on the Draft EIS (which should be included in the NOA for the Draft EIS).
- Availability of the Final EIS.
- The ROD for an EIS.

4.1.2. For actions of local concern, the list of possible notification methods in 40 CFR §1506.6(b)(3) is only illustrative. The EPF may use other equally effective means of notification as a substitute for any of the methods listed. Because many Air Force actions are of limited interest to persons or organizations outside the Air Force, the EPF may limit local notification to the SPOC, local government representatives, and local news media. For all FONSI or EIS notices, if the news media fail to carry the story and, in the case of a FONSI, if the action requires that, after public notice of the FONSI, 30 days must pass before a decision or any action is permissible (see paragraph 3.4.5.2), the public affairs officer must purchase an advertisement in the local newspaper(s) of general circulation (not "legal" newspapers or "legal section" of general newspapers).

4.1.3. For the purpose of EIAP, the EPF begins the time period of local notification when it sends written notification to the state SPOC or other organization (date of letter of notification) or when the local media carries the story (date of story), whichever occurs first. Operations and maintenance funds pay for the advertisements.

4.2. **Base Closure and Realignment.** Base closure or realignment may entail special requirements for environmental analysis. The permanent base closure and realignment law, 10 U.S.C. §2687, requires a report to the Congress when an installation where at least 300 DoD civilian personnel are authorized to be employed is closed, or when a realignment reduces such an installation by at least 50 percent or 1,000 of such personnel, whichever is less. In addition, other base closure laws may be in effect during particular periods. Such nonpermanent closure laws frequently contain provisions limiting the extent of environmental analysis required for actions taken under them. Such provisions may also add requirements for studies not necessarily required by NEPA. When dealing with base closure or realignment EIAP documents, MAJCOMs and HQ USAF offices should obtain legal advice on special congressional requirements. Consult with HQ USAF/XOO, the HQ USAF focal point for the realignment process, decision documents, and congressional requirements.

4.3. Classified Actions (40 CFR §1507.3(c)):

4.3.1. Classification of an action for national defense or foreign policy purposes does not relieve the requirement of complying with NEPA. In classified matters, the Air Force must prepare and make available normal NEPA environmental analysis documents to aid in the decision making process; however, Air Force staff must prepare,

safeguard and disseminate these documents according to established procedures for protecting classified documents. If an EIAP document must be classified, the Air Force may modify or eliminate associated requirements for public notice (including publication in the *Federal Register*) or public involvement in the EIAP. However, the Air Force should obtain comments on classified proposed actions or classified aspects of generally unclassified actions, from public agencies having jurisdiction by law or special expertise, to the extent that such review and comment is consistent with security requirements. Where feasible, the EPF may need to help appropriate personnel from those agencies obtain necessary security clearances to gain access to documents so they can comment on scoping or review the documents.

4.3.2. Where the proposed action is classified and unavailable to the public, the Air Force may keep the entire NEPA process classified and protected under the applicable procedures for the classification level pertinent to the particular information. At times (for example, during weapons system development and base closures and realignments), certain but not all aspects of NEPA documents may later be declassified. In those cases, the EPF should organize the EIAP documents, to the extent practicable, in a way that keeps the most sensitive classified information (which is not expected to be released at any early date) in a separate annex that can remain classified; the rest of the EIAP documents, when declassified, will then be comprehensible as a unit and suitable for release to the public. Thus, the documents will reflect, as much as possible, the nature of the action and its environmental impacts, as well as Air Force compliance with NEPA requirements.

4.3.3. Where the proposed action is not classified, but certain aspects of it need to be protected by security classification, the EPF should tailor the EIAP for a proposed action to permit as normal a level of public involvement as possible, but also fully protect the classified part of the action and environmental analysis. In some instances, the EPF can do this by keeping the classified sections of the EIAP documents in a separate, classified annex.

4.3.4. For paragraph 4.3.2 actions, an NOI or NOA will not be published in the *Federal Register* until the proposed action is declassified. For paragraph 4.3.3 actions, the *Federal Register* will run an unclassified NOA which will advise the public that at some time in the future the Air Force may or will publicly release a declassified document.

4.3.5. The EPF similarly protects classified aspects of FONSI, RODs, or other environmental documents that are part of the EIAP for a proposed action, such as by preparing separate classified annexes to unclassified documents, as necessary.

4.3.6. Whenever a proponent believes that EIAP documents should be kept classified, the EPF must make a

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report of the matter to SAF/MIQ, including proposed modifications of the normal EIAP to protect classified information. The EPF may make such submissions at whatever level of security classification is needed to provide a comprehensive understanding of the issues. SAF/MIQ, with support from SAF/GC and other staff elements as necessary, makes final decisions on EIAP procedures for classified actions.

4.4. Occupational Safety and Health. Assess direct and indirect impacts of proposed actions on the safety and health of Air Force employees and others at a work site. Normally, compliance with Occupational Safety and Health Administration (OSHA) standards will mitigate hazards. The EIAP document does not need to specify such compliance procedures. However, the EIAP documents should discuss impacts that require a change in work practices to achieve an adequate level of health and safety.

4.5. Airspace Proposals. The DoD and the Federal Aviation Administration (FAA) have entered into a Memorandum of Understanding (MOU) that outlines various airspace responsibilities. For purposes of compliance with NEPA, the DoD is the "lead agency" for all proposals initiated by DoD, with the FAA acting as the "cooperating agency." Where airspace proposals initiated by the FAA affect military use, the roles are reversed. The proponent's action officers (civil engineering and local airspace management) must ensure that the FAA is fully integrated into the airspace proposal and related EIAP from the very beginning and that the action officers review the FAA's responsibilities as a cooperating agency. The proponent's Airspace Manager develops the preliminary airspace proposal per appropriate FAA handbooks and the FAA-DoD MOU. The preliminary airspace proposal is the basis for initial dialogue between DoD and the FAA on the proposed action. A close working relationship between DoD and the FAA, through the FAA Regional Air Force Representative, greatly facilitates the airspace proposal process and helps resolve many NEPA issues during the EIAP.

4.6. Air Quality. Section 176(c) of the Clean Air Act Amendments of 1990, 42 U.S.C. §7506(c), establishes a conformity requirement for Federal agencies which has been implemented by regulation, 40 CFR Part 93, Subpart B. All EIAP documents must address applicable conformity requirements and the status of compliance. Conformity applicability analyses and determinations are separate and distinct requirements and should be documented separately. To increase the utility of a conformity determination in performing the EIAP, the conformity determination should be completed prior to the

completion of the EIAP so as to allow incorporation of the information from the conformity determination into the EIAP.

4.7. Pollution Prevention. The Pollution Prevention Act of 1990, 42 U.S.C. §13101(b), established a national policy to prevent or reduce pollution at the source, whenever feasible. Pollution prevention approaches should be applied to all pollution-generating activities. The environmental document should analyze potential pollution that may result from the proposed action and alternatives and must incorporate pollution prevention measures whenever feasible. Where pollution cannot be prevented, the environmental analysis and proposed mitigation measures should include, wherever possible, recycling, energy recovery, treatment, and environmentally safe disposal actions (see AFI 32-7080, *Pollution Prevention Program*).

4.8. Special and Emergency Procedures:

4.8.1. Special Procedures. During the EIAP, unique situations may arise that require EIAP strategies different than those set forth in this instruction. These situations may warrant modification of the procedures in this instruction. EPFs should only consider procedural deviations when the resulting process would benefit the Air Force and still comply with NEPA and CEQ Regulations. EPFs must forward all requests for procedural deviations to HQ USAF/CEV (or ANGRC/CEV) for review and approval by SAF/MIQ.

4.8.2. Emergency Procedures (40 CFR §1506.11). Certain emergency situations may make it necessary to take immediate action having significant environmental impact, without observing all the provisions of the CEQ Regulations or this instruction. If possible, promptly notify HQ USAF/CEV, for SAF/MIQ coordination and CEQ consultation, before undertaking emergency actions that would otherwise not comply with NEPA or this instruction. The immediate notification requirement does not apply where emergency action must be taken without delay. Coordination in this instance must take place as soon as practicable.

4.9. Reporting Requirements:

4.9.1. EAs, EISs, and mitigation measures will be tracked through the Work Information Management System-Environmental Subsystem (WIMS-ES), as required by AFI 32-7002, *Environmental Information Management System*. ANGRC/CE will provide EIAP updates to HQ USAF/CEV through the WIMS-ES.

4.9.2. All documentation will be disposed of according to AFMAN 37-139, *Records Disposition--Standards* (formerly AFR 4-20, volume 2).

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Chapter 5

ACTIONS ABROAD

5.1. Procedures. Procedures for analysis of environmental actions abroad are contained in DoDD 6050.7. That directive provides comprehensive policies, definitions, and procedures for implementing E.O. 12114, *Environmental Effects Abroad of Major Federal Actions*. For analysis of Air Force actions abroad, DoDD 6050.7 will be followed. Also, refer to *Environmental Defense Fund v. Massey*, 986 F. 2d 528.

5.2. Requirements. The EPF will generally perform the same functions for analysis of actions abroad that it performs in the United States. In addition to the requirements of DoDD 6050.7, the following Air Force specific rules apply:

5.2.1. For EAs dealing with global commons, HQ USAF/CEV will review actions that are above the MAJCOM approval authority. In this instance, approval authority refers to the same approval authority that would

apply to an EA in the United States. The EPF documents a decision not to do an EIS.

5.2.2. For EISs dealing with the global commons, the EPF provides sufficient copies to HQ USAF/CEV for the HQ USAF EPC review and AFCEE/EC technical review. After EPC review, the EPF makes a recommendation as to whether the proposed draft EIS will be released as a draft EIS.

5.2.3. For environmental studies and environmental reviews, forward all environmental studies and reviews to HQ USAF/CEV for coordination among appropriate Federal agencies. HQ USAF/CEV makes environmental studies and reviews available to the Department of State and other interested Federal agencies, and, on request, to the United States public, in accordance with DoDD 6050.7. HQ USAF/CEV also may inform interested foreign governments or furnish copies of studies, in accordance with DoDD 6050.7.

JAMES E. MCCARTHY, Maj General, USAF
The Civil Engineer

of section 403 of Reorg. Plan No. 3 of 1946.
See note set out under section 1 of this title.

Code of Federal Regulations

Lands and minerals subject to location, see 43 CFR 3811.1 et seq.

§ 155. Withdrawal, reservation, or restriction of public lands for defense purposes; "public lands" defined; exception

Notwithstanding any other provisions of law, except in time of war or national emergency hereafter declared by the President or the Congress, on and after February 28, 1958 the provisions hereof shall apply to the withdrawal and reservation for, restriction of, and utilization by, the Department of Defense for defense purposes of the public lands of the United States, including public lands in the Territories of Alaska and Hawaii: *Provided, That*—

(1) for the purposes of this Act, the term "public lands" shall be deemed to include, without limiting the meaning thereof, Federal lands and waters of the Outer Continental Shelf, as defined in section 1331 of this title, and Federal lands and waters off the coast of the Territories of Alaska and Hawaii;

(2) nothing in this Act shall be deemed to be applicable to the withdrawal or reservation of public lands specifically as naval petroleum, naval oil shale, or naval coal reserves;

(3) nothing in this Act shall be deemed to be applicable to the warming areas over the Federal lands and waters of the Outer Continental Shelf and Federal lands and waters off the coast of the Territory of Alaska reserved for use of the military departments prior to August 7, 1953; and

(4) nothing in this section, section 156, or section 157 of this title shall be deemed to be applicable either to those reservations or withdrawals which expired due to the ending of the unlimited national emergency of May 27, 1941, and which subsequent to such expiration have been and are now used by the military departments with the concurrence of the Department of the Interior, or to the withdrawal of public domain lands of the Marine Corps Training Center, Twenty-nine Palms, California, and the naval gunnery ranges in the State of Nevada designated as Basic Black Rock and Basic Sawhwa Mountain.

(Pub.L. 85-337, § 1, Feb. 28, 1958, 72 Stat. 27.)

Historical Note

References in Text. This Act, referred to in pars. (1), (2), and (3), is Pub.L. 85-337, Feb. 28, 1958, 72 Stat. 27, which enacted sections 155 to 158 of this title and section 2671 of Title 10, Armed Forces, and amended section 472 of Title 10, Armed Forces, and section 472 of Title 40, Public Buildings, Property and Works. For complete classification of this Act to the Code, see Tables in this volume.

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No. 3269, Jan. 3, 1959, 24 F.R. 81, 73 Stat. c. 15, and Hawaii was admitted into the Union on Aug. 21, 1959, upon the issuance of Proc. No. 3309, Aug. 21, 1959, 24 F.R. 6868, 73 Stat. c. 74. For Alaska Statehood Law, see Pub.L. 85-508, July 7, 1958, 72 Stat. 339, set out as a note preceding section 21 of Title 48.

Legislative History. For legislative history and purpose of Pub.L. 85-337, see 1958 U.S. Code Cong. and Adm. News, p. 2227.

West's Federal Practice Manual

Withdrawal and reservation of public lands, see § 5227.

Code of Federal Regulations

Defense Department lands, mineral exploration and extraction, see 32 CFR 235.1 et seq. Land withdrawals, see 43 CFR 2300.0-1 et seq.

§ 156. Approval by Congress necessary for withdrawal, reservation, or restriction of over 5,000 acres for any Department of Defense project or facility

No public land, water, or land and water area shall, except by Act of Congress, on and after February 28, 1958 be (1) withdrawn from settlement, location, sale, or entry for the use of the Department of Defense for defense purposes; (2) reserved for such use; or (3) restricted from operation of the mineral leasing provisions of the Outer Continental Shelf Lands Act [43 U.S.C.A. § 1331 et seq.], if such withdrawal, reservation, or restriction would result in the withdrawal, reservation, or restriction of more than five thousand acres in the aggregate for any one defense project or facility of the Department of Defense since February 28, 1958, or since the last previous Act of Congress which withdrew, reserved, or restricted public land, water, or land and water area for that project or facility, whichever is later.

(Pub.L. 85-337, § 2, Feb. 28, 1958, 72 Stat. 28.)

Historical Note

References in Text. The Outer Continental Shelf Lands Act, referred to in text, is Act Aug. 7, 1953, c. 345, 67 Stat. 462, as amended, which is classified generally to subchapter III (section 1331 et seq.) of chapter 29 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 1331 of this title and Tables in this volume.

Short Title. Pub.L. 85-337, Feb. 28, 1958, 72 Stat. 27, which enacted sections 155 to 158 of this title and section 2671 of Title 10, Armed Forces, and amended section 472 of Title 40, Public Buildings, Property and Works, is popularly known as the Engle Act.

Legislative History. For legislative history and purpose of Pub.L. 85-337, see 1958 U.S. Code Cong. and Adm. News, p. 2227.

Cross References

Applications for withdrawal, reservation or restriction under this section, see section 156 of this title.

Withdrawals or reservations of public lands which expired at end of unlimited national emergency of May 27, 1941, provisions of this section inapplicable to, see section 155 of this title.

Notes of Decisions

1. Retrospective effect

This section providing that no withdrawals in excess of 5,000 acres can be made by military without congressional approval oper-

ated only prospectively and did not invalidate prior land order. *Mollohan v. Gray, C.A. Ariz.* 1969, 413 F.2d 349.

§ 157. Applications for withdrawal, reservation, or restriction; specifications

Any application filed on and after February 28, 1958 for a withdrawal, reservation, or restriction, the approval of which will, under section 156 of this title, require an Act of Congress, shall specify—

- (1) the name of the requesting agency and intended using agency;
- (2) location of the area involved, to include a detailed description of the exterior boundaries and excepted areas, if any, within such proposed withdrawal, reservation, or restriction;
- (3) gross land and water acreage within the exterior boundaries of the requested withdrawal, reservation, or restriction, and net public land, water, or public land and water acreage covered by the application;
- (4) the purpose or purposes for which the area is proposed to be withdrawn, reserved, or restricted, or if the purpose or purposes are classified for national security reasons, a statement to that effect;
- (5) whether the proposed use will result in contamination of any or all of the requested withdrawal, reservation, or restriction area, and if so, whether such contamination will be permanent or temporary;
- (6) the period during which the proposed withdrawal, reservation, or restriction will continue in effect;
- (7) whether, and if so to what extent, the proposed use will affect continuing full operation of the public land laws and Federal regulations relating to conservation, utilization, and development of mineral resources, timber and other material resources, grazing resources, fish and wildlife resources, water resources, and scenic, wilderness, and recreation and other values; and
- (8) if effecting the purpose for which the area is proposed to be withdrawn, reserved, or restricted, will involve the use of water in any State, whether, subject to existing rights under law, the intended using agency has acquired, or proposes to acquire, rights to the use thereof in conformity with State laws and procedures relating to the control, appropriation, use, and distribution of water.

Pub.L. 85-337, § 3, Feb. 28, 1958, 72 Stat. 28.)

Historical Note

Short Title. Pub.L. 85-337, Feb. 28, 1958, 72 Stat. 27, which enacted sections 155 to 158 of this title and section 2671 of Title 10, Armed Forces, and amended section 472 of title 40, Public Buildings, Property and

Legislative History. For legislative history and purpose of Pub.L. 85-337, see 1958 U.S. Code Cong. and Adm. News, p. 2227.

Cross References

Withdrawals or reservations of public lands which expired at end of unlimited national emergency of May 27, 1941, provisions of this section inapplicable to, see section 155 of this title.

§ 158. Mineral resources on withdrawn lands; disposition and exploration

All withdrawals or reservations of public lands for the use of any agency of the Department of Defense, except lands withdrawn or reserved specifically as naval petroleum, naval oil shale, or naval coal reserves, heretofore or hereafter made by the United States, shall be deemed to be subject to the condition that all minerals, including oil and gas, in the lands so withdrawn or reserved are under the jurisdiction of the Secretary of the Interior and there shall be no disposition of, or exploration for, any minerals in such lands except under the applicable public land mining and mineral leasing laws: *Provided*, That no disposition of, or exploration for, any minerals in such lands shall be made where the Secretary of Defense, after consultation with the Secretary of the Interior, determines that such disposition or exploration is inconsistent with the military use of the lands so withdrawn or reserved.

(Pub.L. 85-337, § 6, Feb. 28, 1958, 72 Stat. 30.)

Historical Note

References in Text. The mining laws, referred to in text, are classified generally to Title 30, Mineral Lands and Mining.

Mineral leasing laws, referred to in text, have been defined in sections 351, 505, 530, and 541e of Title 30, Mineral Lands and Mining, to mean Acts Oct. 20, 1914, c. 330, 38 Stat. 741; Feb. 25, 1920, c. 85, 41 Stat. 437; Apr. 17, 1926, c. 158, 44 Stat. 301; and Feb. 7, 1937, c. 66, 44 Stat. 1057. The Act of Oct. 20, 1914, was repealed by Pub.L. 86-352, § 1, Sept. 9, 1959, 73 Stat. 490. The Act of Feb. 25, 1920, is popularly known as the Mineral Lands Leasing Act and is classified principally to chapter 3A (section 181 et seq.) of Title 30. The Act of Apr. 17, 1926, is classified generally to subchapter VIII (sec-

tion 271 et seq.) of chapter 3A of Title 30. The Act of Feb. 7, 1927, is classified principally to subchapter IX (section 281 et seq.) of chapter 3A of Title 30. For complete classification of these Acts to the Code, see Tables volume.

Short Title. Pub.L. 85-337, Feb. 28, 1958, 72 Stat. 27, which enacted sections 155 to 158 of this title and section 2671 of Title 10, Armed Forces, and amended section 472 of Title 40, Public Buildings, Property and Works, is popularly known as the Engle Act.

Legislative History. For legislative history and purpose of Pub.L. 85-337, see 1958 U.S. Code Cong. and Adm. News, p. 2227.

(b) Either party to an exchange may reserve minerals, easements, or rights of use either for its own benefits, for the benefit of third parties, or for the benefit of the general public. Any such reservation, whether in lands conveyed to or by the United States, shall be subject to such reasonable conditions respecting ingress and egress and the use of the surface of the land as may be deemed necessary by the authorized officer. When minerals are reserved in lands conveyed by the United States, any person who prospects for or acquires the right to mine and remove such reserved mineral deposits shall be liable to the surface owners according to their respective interests for any actual damage to the surface or to the improvements thereon resulting from prospecting, entering, or mining operations.

Prior to entering lands in non-Federal ownership, such person shall either obtain the surface owner's written consent or file with the authorized officer a good and sufficient bond or undertaking to the United States in an amount acceptable to the authorized officer for the use and benefit of the surface owner to secure payment of such damages as may be determined in an action brought on the bond or undertaking in a court of competent jurisdiction. Where written consent is not obtained, a letter request shall be filed with the authorized officer for a determination of the amount of the bond or undertaking. A copy of such request will be served on the surface owner or owners by certified mail.

(c) Upon acceptance of title, any lands or interests in lands acquired by the United States by exchange under the authority of section 5 of the Act of October 21, 1970, shall become public lands, and shall become a part of the King Range National Conservation Area subject to all the laws and regulations applicable thereto without further order of the authorized officer.

(d) Any exchange transaction will be handled in a manner consistent with the authorizing law and regulations in part 2200 of this subchapter.

(141 FR 15851, Apr. 15, 1976)

the Interior's authority to process Federal land withdrawal applications and, where appropriate, to make, modify or extend Federal land withdrawals. Procedures for making emergency withdrawals are also included.

(b) The regulations do not apply to withdrawals that are made by the Secretary of the Interior pursuant to an act of Congress which directs the issuance of an order by the Secretary. Likewise, procedures applicable to withdrawals authorized under the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1272(b); 1281), Act of 1977 (30 U.S.C. 1272(b); 1281), and procedures relating to the Secretary's authority to establish Indian reservations or to add lands to the reservations pursuant to special legislation or in accordance with section 7 of the Act of June 10, 1934 (25 U.S.C. 467), as supplemented by section 1 of the Act of May 1, 1936 (25 U.S.C. 473a), are not included in these regulations.

(c) General procedures relating to the processing of revocation of withdrawals and relating to the relinquishment of reserved Federal land areas are not included in this part.

§ 2300.0-3 Authority.

(a)(1) Section 204 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1714) gives the Secretary of the Interior general authority to make, modify, extend or revoke withdrawals, but only in accordance with the provisions and limitations of that section. Among other limitations, the Federal Land Policy and Management Act of 1976 provides that the Secretary of the Interior does not have authority to:

- (i) Make, modify or revoke any withdrawal created by an Act of Congress;
- (ii) Make a withdrawal which can be made only by an Act of Congress;
- (iii) Modify or revoke any withdrawal creating national monuments under the Act of June 8, 1906 (16 U.S.C. 431-433), sometimes referred to as the Antiquities Act;
- (iv) Modify or revoke any withdrawal which added lands to the National Wildlife Refuge System prior to October 21, 1976, the date of approval of the Federal Land Policy and Management Act of 1976 or which thereafter

adds lands to that System under the terms of that Act. In this connection, nothing in the Federal Land Policy and Management Act of 1976 is intended to modify or change any provision of the Act of February 27, 1976 (16 U.S.C. 668 d(d)(a)).

(2) Executive Order 10355 of May 26, 1952 (17 FR 4831), confers on the Secretary of the Interior all of the delegable authority of the President to make, modify and revoke withdrawals and reservations with respect to lands of the public domain and other lands owned and controlled by the United States in the continental United States or Alaska.

(3) The Act of February 28, 1958 (43 U.S.C. 155-158), sometimes referred to as the Engle Act, places on the Secretary of the Interior the responsibility to process Department of Defense applications for national defense withdrawals, reservations or restrictions aggregating 5,000 acres or more for any one project or facility. These withdrawals, reservations or restrictions may only be made by an act of Congress, except in time of war or national emergency declared by the President or the Congress and except as otherwise expressly provided in the Act of February 28, 1958.

(4) Section 302(b) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1732(b)) authorizes the Secretary of the Interior to regulate the management of the public lands as defined in the Act through instruments, such as memorandum of understanding, which the Secretary deems appropriate.

(5) Section 1326(a) of the Alaska National Interest Lands Conservation Act (Pub. L. 96-487), authorizes the President and the Secretary to make with withdrawals exceeding 5,000 acres, in the aggregate, in the State of Alaska subject to the provisions that such withdrawals shall not become effective until notice is provided in the Federal Register and to both Houses of the Congress and such withdrawals shall terminate unless Congress passes a Joint Resolution of approval within one year after the notice of withdrawal has been submitted to the Congress.

(b) The following references do not afford either withdrawal application

PART 2300—LAND WITHDRAWALS

Subpart 2300—Withdrawals, General

- Sec.
- 2300.0-1 Purpose.
- 2300.0-3 Authority.
- 2300.0-5 Definitions.

Subpart 2310—Withdrawals, General Procedure

- 2310.1 Procedures: General.
- 2310.1-1 Preapplication consultation.
- 2310.1-2 Submission of applications.
- 2310.1-3 Submission of withdrawal petitions.
- 2310.1-4 Cancellation of withdrawal applications or withdrawal proposals and denial of applications.
- 2310.2 Segregative effect of withdrawal applications or withdrawal proposals.
- 2310.2-1 Termination of segregative effect of withdrawal applications or withdrawal proposals.
- 2310.3 Action on withdrawal applications and withdrawal proposals, except for emergency withdrawals.
- 2310.3-1 Publication and public meeting requirements.
- 2310.3-2 Development and processing of the case file for submission to the Secretary.
- 2310.3-3 Action by the Secretary: Public land orders and notices of denial.
- 2310.3-4 Duration of withdrawals.
- 2310.3-5 Compensation for improvements.
- 2310.3-6 Transfer of jurisdiction.
- 2310.4 Review and extensions of withdrawals.
- 2310.5 Special action on emergency withdrawals.

Subpart 2320—Federal Energy Regulatory Commission Withdrawals

- 2320.0-3 Authority.
 - 2320.1 Lands considered withdrawn or classified for power purposes.
 - 2320.2 General determinations under the Federal Power Act.
 - 2320.3 Applications for restoration.
- Authority: 43 U.S.C. 1201; 43 U.S.C. 1740; E.O. 10355 (17 FR 4831, 4833).
- Source: 46 FR 5796, Jan. 19, 1981, unless otherwise noted.

Subpart 2300—Withdrawals, General

§ 2300.0-1 Purpose.

(a) These regulations set forth procedures implementing the Secretary of

processing or withdrawal authority but are provided as background information.

(1) Executive Order 6910 of November 5, 1935, as modified, withdrew sizable portions of the public lands for classification and conservation. These lands and the grazing districts established under the Taylor Grazing Act of 1934, as amended, are subject to the classification and opening procedures of section 7 of the Taylor Grazing Act of June 28, 1934, as amended (43 U.S.C. 315f); however, they are not closed to the operation of the mining or mineral leasing laws unless separately withdrawn or reserved, classified for retention from disposal, or precluded from mineral leasing or mining location under other authority.

(2) The Classification and Multiple Use Act of September 19, 1964 (43 U.S.C. 1411-1418), authorized the Secretary of the Interior through the Bureau of Land Management for retention or disposal under Federal ownership and management. Numerous classification decisions based upon this statutory authority were made by the Secretary of the Interior. For the effect of these classification with regard to the disposal and leasing laws of the United States, see subparts 2440 and 2461 of this title.

(3) Section 202 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1712) provides for land use planning and resultant management decisions which may operate to totally eliminate a particular land use, including one or more *principal* or *major* uses, as defined in the Act. Withdrawals made pursuant to section 204 of the Federal Land Policy and Management Act of 1976 may be used in appropriate cases, to carry out management decisions, except that *public lands*, as defined in the Act, can be removed from or restored to the operation of the Mining Law of 1872, as amended, or transferred to another department, agency or office, only by withdrawal action pursuant to section 204 of the Federal Land Policy and Management Act of 1976 or other action pursuant to applicable law.

(4) The first proviso of section

petroglyphs, artifacts, objects, ruins, works of art, architecture or natural settings or features which were important to prehistoric, historic or other land and resource use events.

(f) *Archaeological areas/resources* means sites or areas containing important evidence or the physical remains of former but now extinct cultural groups, their skeletons, settlements, implements, artifacts, monuments and inscriptions.

(g) *Resource use* means a land use having as its primary objective the preservation, conservation, enhancement or development of:

(1) Any renewable or nonrenewable natural resource indigenous to a particular land area, including, but not limited to, mineral, timber, forage, water, fish or wildlife resources, or

(2) Any resource value associated with a particular land area, including, but not limited to, watershed, power, scenic, wilderness, clean air or recreational values. The term does not include military or other governmental activities requiring land sites only as an incidental means to achieving an end not related primarily to the preservation, conservation, enhancement or development of natural resources or resource values indigenous to or associated with a particular land area.

(h) *Withdrawal* means withholding an area of Federal land from settlement, sale, location, or entry under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than *property* governed by the Federal Property and Administrative Services Act (40 U.S.C. 472), from one department, bureau or agency to another department, bureau or agency.

(i) *Department* means a unit of the Executive branch of the Federal Government which is headed by a member of the President's Cabinet.

(j) *Agency* means a unit of the Executive branch of the Federal Government which is not within a Department.

(k) *Office* means an office or bureau of the Department of the Interior.

(l) *Applicant* means any Federal department, agency or office.

(m) *Segregation* means the removal for a limited period, subject to valid existing rights, of a specified area of the public lands from the operation of the public land laws, including the mining laws, pursuant to the exercise by the Secretary of regulatory authority to allow for the orderly administration of the public lands.

(n) *Legal description* means a written land description based upon either an approved and filed Federal land survey executed as a part of the United States Public Land Survey System or, where specifically authorized under Federal law, upon a projection diagram. In the absence of the foregoing, the term means a written description, approved by the authorized officer, which defines the exterior boundaries of a tract of land by reference to a metes and bounds survey or natural or other monuments.

(o) *Modify or modification* does not include, for the purposes of section 204 of the Act (43 U.S.C. 1714), the addition of lands to an existing withdrawal or the partial revocation of a withdrawal.

(p) *Withdrawal petition* means a request, originated within the Department of the Interior and submitted to the Secretary, to file an application for withdrawal.

(q) *Withdrawal proposal* means a withdrawal petition approved by the Secretary.

Subpart 2310—Withdrawals, General: Procedure

§ 2310.1 Procedures: General.

(a) The basic steps leading up to the making, modification or extension of a withdrawal, except emergency withdrawals, are:

- (1) Preapplication consultation;
- (2) Obtaining Secretarial approval of a withdrawal petition in appropriate cases;
- (3) Submission for filing of an application for a requested withdrawal.

(4) Publication in the Federal Register of a notice stating that a withdrawal proposal has been made or that an application has been submitted for filing.

(5) Negotiations between the applicant and the authorized officer as well as the accomplishment of investigations, studies and analyses which may be required to process an application.

(6) Preparation of the case file to be considered by the Secretary, including the authorized officer's findings and recommendations.

(7) Transmittal of the case file to the Director, Bureau of Land Management, for the Director's review and decision regarding the findings and recommendations of the authorized officer.

(8) Transmittal of the case file to the Secretary.

(9) Publication of a public land order or a notice of denial signed by the Secretary. If the application seeks a national defense withdrawal that may only be made by an Act of Congress, the Secretary will transmit to the Congress proposed legislation along with the Secretary's recommendations, and documentation relating thereto.

§ 2310.1-1 Preapplication consultation.

A potential applicant should contact the appropriate State office of the Bureau of Land Management well in advance of the anticipated submission date of an application. Early consultation can familiarize the potential applicant with the responsibilities of an applicant, the authorized officer and the Secretary. Early consultation also will assist in determining the need for a withdrawal, taking possible alternatives into account, increase the likelihood that the applicant's needs will be considered in ongoing land use planning, assist in determining the extent to which any public lands that may be involved would have to be segregated if an application is submitted; and result in preliminary determinations regarding the scheduling of various investigations, studies, analyses, public meetings and negotiations that may be required for a withdrawal. Studies and analyses should be programmed to ensure their completion in sufficient time to allow the Secretary or the

Congress, adequate time to act on the application before the expiration of the segregation period.

§ 2310.1-2 Submission of applications.

(a) Applications for the making, modification or extension of a withdrawal shall be submitted for filing, in duplicate, in the proper Bureau of Land Management office, as set forth in § 1821.2-1 of this title, except for emergency withdrawal requests and applications that are classified for national security reasons. Requests for emergency withdrawals and applications that are classified for national security reasons shall be submitted, in duplicate, in the Office of the Secretary, Department of the Interior, Washington, D.C. 20240.

(b) Before the authorized officer can take action on a withdrawal proposal, a withdrawal application in support thereof shall be submitted. The application may be submitted simultaneously with the making of a withdrawal proposal, in which case only the notice required by § 2310.3-1(a) of this title, referencing both the application and the withdrawal proposal, shall be published.

(c) No specific form is required, but, except as otherwise provided in § 2310.3-6(b) of this title, the application shall contain at least the following information:

(1) The name and address of the applicant. Where the organization intending to use the lands is different from the applicant, the name and address of such using agency shall also be included.

(2) If the applicant is a department or agency other than the Department of the Interior or an office thereof, a statement of the delegation or delegations of authority of the official acting on behalf of the department or agency submitting the application, substantiating that the official is empowered to act on behalf of the head of the department or agency in connection with all matters pertaining to the application.

(3) If the lands which are subject to an application are wholly or partially under the administration of any department or agency other than the

Department of the Interior, the Secretary shall make or modify a withdrawal only with the consent of the head of the department or agency concerned, except in the case of an emergency withdrawal. In such case, a copy of the written consent shall accompany the application. The requirements of section (e) of E.O. 10355 (17 FR 4831), shall be complied with in those instances where the Order applies.

(4) The type of withdrawal action that is being requested (See § 2300.0-6(h) of this title) and whether the application pertains to the making, extension or modification of a withdrawal.

(5) A description of the lands involved in the application, which shall consist of the following:

(i) A legal description of the entire land area that falls within the exterior boundaries of the affected area and the total acreage of such lands;

(ii) A legal description of the lands, Federal or otherwise, within the exterior boundaries that are to be excepted from the requested action, and after deducting the total acreage of all the excepted lands, the net remaining acreage of all Federal lands (as well as all non-Federal lands which, if they should be returned to or should pass to Federal ownership, would become subject to the withdrawal) within the exterior boundaries of the affected land areas;

(iii) In the case of a national defense withdrawal which can only be made by an Act of Congress, sections 3(2) and 3(3) of the Act of February 28, 1958 (43 U.S.C. 157 (2), (3)) shall be complied with in lieu of paragraphs (c)(5) (i) and (ii) of this section.

(6) If the application is for a withdrawal that would overlap, or that would add lands to one or more existing withdrawals, the application shall also contain:

(i) An identification of each of the existing withdrawals, including the project name, if any, the date of the withdrawal order, the number and type of order, if known, or, in lieu of the foregoing, a copy of the order;

(ii) As to each existing withdrawal that would be overlapped by the requested withdrawal, the total area and

a legal description of the area that would be overlapped; and

(iii) The total acreage, Federal or otherwise, that would be added to the existing withdrawal, if the new application is allowed.

(7) The public purpose or statutory program for which the lands would be withdrawn. If the purpose or program for which the lands would be withdrawn is classified for national security reasons, a statement to that effect shall be included; but, if at all possible, a general description of the use to which the lands would be devoted, if the requested withdrawal is allowed, should be included. In the case of applications that are not classified for national security reasons, an analysis of the manner in which the lands as well as their natural resources and resource values would be used to implement the purpose or program shall be provided.

(8) The extent to which the lands embraced in the application are requested to be withheld from settlement, sale, location or entry under the public land laws, including the mining laws, together with the extent to which, and the time during which, the lands involved in the application would be temporarily segregated in accordance with § 2310.2 of this subpart.

(9) The type of temporary land use that, at the discretion of the authorized officer, may be permitted or allowed during the segregation period, in accordance with § 2310.2 of this subpart.

(10) An analysis and explanation of why neither a right-of-way under section 507 of the Act (43 U.S.C. 1767), nor a cooperative agreement under sections 302(b) (43 U.S.C. 1732(b)) and 307(b) (43 U.S.C. 1737(b)) of the act would adequately provide for the proposed use.

(11) The duration of the withdrawal, with a statement in justification thereof (see § 2310.3-4 of this title). Where an extension of an existing withdrawal is requested, its duration may not exceed the duration of the existing withdrawal.

(12) A statement as to whether any suitable alternative sites are available for the proposed use or for uses which the requested withdrawal action would

displace. The statement shall include a study comparing the projected costs of obtaining each alternative site in suitable condition for the intended use, as well as the projected costs of obtaining and developing each alternative site for uses that the requested withdrawal action would displace.

(13) A statement as to whether water will or will not be needed to fulfill the purpose of the requested withdrawal action.

(14) The place where records relating to the application can be examined by interested persons.

(d) Except in the case of an emergency withdrawal, if the preceding application requirements have not been met, or if an application seeks an action that is not within the scope of the Secretary's authority, the application may be rejected by the authorized officer as a defective application.

§ 2310.1-3 Submission of withdrawal petitions.

(a) Withdrawal petitions shall be submitted to the Director, Bureau of Land Management, for transmittal to the Secretary.

(b) No specific form is required, but the petition shall contain at least the following information:

(1) The office originating the petition;

(2) The type and purpose of the proposed withdrawal action (See § 2300.0-5b) of this title) and whether the petition pertains to the making, extension or modification of a withdrawal;

(3) A legal description of the entire land area that falls within the exterior boundaries affected by the petition, together with the total acreage of such lands, and a map of the area;

(4) The extent to which and the time during which any public lands that may be involved in the petition would be temporarily segregated and the temporary land uses that may be permitted during the segregation period, in accordance with § 2310.2 of this title; and

(5) A preliminary identification of the mineral resources in the area.

(c) Except in the case of petitions seeking emergency withdrawals, if a petition is submitted simultaneously with a withdrawal application, the in-

formation requirements pertaining to withdrawal applications (See § 2310.1-2 of this title), shall supersede the requirements of this section.

(d) If a petition seeks an emergency withdrawal under the provisions of section 204(e) of the act, the petition shall be filed simultaneously with an application for withdrawal. In such instances, the petition/application shall provide as much of the information required by §§ 2310.1-2(c) and 2310.3-2(b) of this title as is available to the petitioner when the petition is submitted.

(e) Upon the approval by the Secretary of a petition for withdrawal, the petition shall be considered as a Secretarial proposal for withdrawal, and notice of the withdrawal proposal shall be published immediately in the Federal Register in accordance with § 2310.3-1(a) of this title. If a petition which seeks an emergency withdrawal is approved by the Secretary, the publication and notice provisions pertaining to emergency withdrawals shall be applicable. (See § 2310.5 of this title.)

§ 2310.1-4 Cancellation of withdrawal applications or withdrawal proposals and denial of applications.

(a) Withdrawal or extension applications and proposals shall be amended promptly to cancel the application or proposal, in whole or in part, with respect to any lands which the applicant, in the case of applications, or the office, in the case of proposals, determines are no longer needed in connection with a requested or proposed action. The filing of a cancellation notice in each such case shall result in the termination of the segregation of the public lands that are to be eliminated from the withdrawal application or withdrawal proposal. (See § 2310.2-1 of this title.)

(b) The Secretary may deny an application if the costs (as defined in section 304(b) of the Act (43 U.S.C. 1734(b)) estimated to be incurred by the Department of the Interior would, in the judgment of the Secretary, be excessive in relation to available funds appropriated for processing applications requesting a discretionary with-

drawal, or a modification or extension of a withdrawal.

§ 2310.2 Segregative effect of withdrawal applications or withdrawal proposals.

The following provisions apply only to applications or proposals to withdraw lands and not to applications or proposals seeking to modify or extend withdrawals.

(a) *Withdrawal applications or withdrawal proposals submitted on or after October 21, 1976.* Within 30 days of the submission for filing of a withdrawal application, or whenever a withdrawal proposal is made, a notice stating that the application has been submitted or that the proposal has been made, shall be published in the Federal Register by the authorized officer. Publication of the notice in the Federal Register shall segregate the lands described in the application or proposal from settlement, sale, location or entry under the public land laws, including the mining laws, to the extent specified in the notice, for 2 years from the date of publication of the notice unless the segregative effect is terminated sooner in accordance with the provisions of this part. The notices published pursuant to the provisions of this section shall be the same notices required by § 2310.3-1 of this title. Publication of a notice of a withdrawal application that is based on a prior withdrawal proposal, notice of which was published in the Federal Register, shall not operate to extend the segregation period which commenced upon the publication of the prior withdrawal proposal.

(b) *Withdrawal applications submitted before October 21, 1976.* The public lands described in a withdrawal application filed before October 21, 1976, shall remain segregated through October 20, 1991, from settlement, sale, location or entry under the public land laws, including the mining laws, to the extent specified in the Federal Register notice or notices that pertain to the application, unless the segregative effect of the application is terminated sooner in accordance with other provisions of this part. Any amendment made on or after October 21, 1976, of a withdrawal application submitted before October 21, 1976, for the pur-

pose of adding Federal lands to the lands described in a previous application, shall require the publication in the Federal Register, within 30 days of receipt of the amended application, of a notice of the amendment of the withdrawal application. All of the lands described in the amended application which includes those lands described in the original application shall be segregated for 2 years from the date of publication of the notice of the amended application in the Federal Register.

(c) Applications for licenses, permits, cooperative agreements or other discretionary land use authorizations of a temporary nature that are filed on or after October 21, 1976, regarding lands involved in a withdrawal application or a withdrawal proposal and that are listed in the notices required by § 2310.3-2 of this title as permissible during the segregation period, may be approved by the authorized officer while the lands remain segregated.

(d) Except as provided in paragraph (c) of this section, applications for the use of lands involved in a withdrawal application or a withdrawal proposal, the allowance of which is discretionary, shall be denied.

(e) The temporary segregation of lands in connection with a withdrawal application or a withdrawal proposal shall not affect in any respect Federal agency administrative jurisdiction of the lands, and the segregation shall not have the effect of authorizing or permitting any use of the lands by the applicant or using agency.

§ 2310.2-1 Termination of the segregative effect of withdrawal applications or withdrawal proposals.

(a) The publication in the Federal Register of an order allowing a withdrawal application, in whole or in part, shall terminate the segregative effect of the application as to those lands withdrawn by the order.

(b) The denial of a withdrawal application, in whole or in part, shall result in the termination of the segregative effect of the application or proposal as to those lands where the withdrawal is disallowed. Within 30 days following the decision to disallow the applica-

tion or proposal, in whole or in part, the authorized officer shall publish a notice in the Federal Register specifying the reasons for the denial and the date that the segregative period terminated. The termination date of the segregative period shall be noted promptly on the public land status records on or before the termination date.

(c) The cancellation, in whole or in part, of a withdrawal application or a withdrawal proposal shall result in the termination of the segregative effect of the application or proposal, as to those lands deleted from the application or proposal. The authorized officer shall publish a notice in the Federal Register, within 30 days following the date of receipt of the cancellation, specifying the date that the segregation terminated. The termination date of the segregation shall be noted promptly on the public land status records. If the cancellation applies to only a portion of the public lands that are described in the withdrawal application or withdrawal proposal, then the cancellation shall remain segregated.

(d) The segregative effect resulting from the publication on or after October 21, 1976, of a Federal Register notice of the submission of a withdrawal application or the making of a withdrawal proposal shall terminate 2 years after the publication date of the Federal Register notice unless the segregation is terminated sooner by other provisions of this section. A notice specifying the date and time of termination shall be published in the Federal Register by the authorized officer 30 days in advance of the termination date. The public land status records shall be noted as to the termination date of the segregative period on or before the termination date. Such a termination shall not affect the processing of the withdrawal application.

(e) The segregative effect resulting from the submission of a withdrawal application or withdrawal proposal before October 21, 1976, shall terminate on October 20, 1991, unless the segregation is terminated sooner by other provisions of this part. A notice specifying the date and time of termi-

nation shall be published in the Federal Register by the authorized officer 30 days in advance of October 20, 1991. The public land status records shall be noted as to the termination date of the segregative period on or before October 20, 1991.

§ 2310.3 Action on withdrawal applications and withdrawal proposals, except for emergency withdrawals.

§ 2310.3-1 Publication and public meeting requirements.

(a) When a withdrawal proposal is made, a notice to that effect shall be published immediately in the Federal Register. The notice shall contain the information required by § 2310.1-3 of this title. In the event a withdrawal petition, which subsequently becomes a withdrawal proposal, is submitted simultaneously with a withdrawal application, the information requirements for notices pertaining to withdrawal applications (See paragraph (b) of this section) shall supersede the information requirements of this paragraph. However, in such instances, the notice required by paragraph (b) of this section shall be published immediately without regard to the 30-day period allowed for the filing for publication in the Federal Register of withdrawal application notices.

(b)(1) Except for emergency withdrawals and except as otherwise provided in paragraph (a) of this section, within 30 days of the submission for filing of a withdrawal, extension or modification application, the authorized officer shall publish in the Federal Register a notice to that effect. The authorized officer also shall publish the same notice in at least one newspaper having a general circulation in the vicinity of the lands involved and, with the cooperation and assistance of the applicant, when appropriate, shall provide sufficient publicity to inform the interested public of the requested action.

(2) The notice shall contain, in summary form, the information required by § 2310.1-2 of this title, except that the authorized officer may exclude the information required by § 2310.1-2(c)(2) of this title, and as much of the descriptive information required by

§ 2310.1-2(c) (5) and (6) of this title as the authorized officer considers appropriate. The notice shall:

(i) Provide a legal description of the lands affected by the application, together with the total acreage of such lands;

(ii) Specify the extent to which and the time during which any lands that may be involved may be segregated in accordance with § 2310.2 of this title;

(iii) Identify the temporary land uses that may be permitted or allowed during the segregation period as provided for in § 2310.2(c) of this title;

(iv) Provide for a suitable period of at least 90 days after publication of the notice, for public comment on the requested action;

(v) Solicit written comments from the public as to the requested action and provide for one or more public meetings in relation to requested actions involving 5,000 or more acres in the aggregate and, as to requested actions involving less than 5,000 acres, solicit and evaluate the written comments of the public as to the requested action and as to the need for public meetings;

(vi) State, in the case of a national defense withdrawal which can only be made by an Act of Congress, that if the withdrawal is to be made, it will be made by an Act of Congress;

(vii) Provide the address of the Bureau of Land Management office in which the application and the case file pertaining to it are available for public inspection and to which the written comments of the public should be sent;

(viii) State that the application will be processed in accordance with the regulations set forth in part 2300 of this title;

(ix) Reference, if appropriate, the Federal Register in which the notice of a withdrawal proposal, if any, pertaining to the application was published previously;

(x) Provide such additional information as the authorized officer deems necessary or appropriate.

(c)(1) In determining whether a public meeting will be held on applications involving less than 5,000 acres of land, the authorized officer shall consider whether or not:

- (i) A large number of persons have expressed objections to or suggestions regarding the requested action;
 - (ii) The objections or suggestions expressed appear to have merit without regard to the number of persons responding;
 - (iii) A public meeting can effectively develop information which would otherwise be difficult or costly to accumulate;
 - (iv) The requested action, because of the amount of acreage involved, the location of the affected lands or other relevant factors, would have an important effect on the public, as for example, the national or regional economy;
 - (v) There is an appreciable public interest in the lands or their use, as indicated by the records of the Bureau of Land Management;
 - (vi) There is prevailing public opinion in the area that favors public meetings or shows particular concern over withdrawal actions; and
 - (vii) The applicant has requested a public meeting.
- (2) A public meeting, whether required or determined by the authorized officer to be necessary, shall be held at a time and place convenient to the interested public, the applicant and the authorized officer. A notice stating the time and place of the meeting, shall be published in the Federal Register and in at least one newspaper having a general circulation in the vicinity of lands involved in the requested action, at least 30 days before the scheduled date of the meeting.

§ 2310.3-2 Development and processing of the case file for submission to the Secretary.

(a) Except as otherwise provided in § 2310.3-6(b) of this title, the information, studies, analyses and reports identified in this paragraph that are required by applicable statutes, or which the authorized officer determines to be required for the Secretary or the Congress to make a decision or recommendation on a requested withdrawal, shall be provided by the applicant. The authorized officer shall assist the applicant to the extent the authorized officer considers it necessary or appropriate to do so. The

qualifications of all specialists utilized by either the authorized officer or the applicant to prepare the information, studies, analyses and reports shall be provided.

(b) The information, studies, analyses and reports which, as appropriate, shall be provided by the applicant shall include:

(1) A report identifying the present users of the lands involved, explaining how the users will be affected by the proposed use and analyzing the manner in which existing and potential resource uses are incompatible with or conflict with the proposed use of the lands and resources that would be affected by the requested action. The report shall also specify the provisions that are to be made for, and an economic analysis of, the continuation, alteration or termination of existing uses. If the provisions of § 2310.3-5 of this title are applicable to the proposed withdrawal, the applicant shall also furnish a certification that the requirements of that section shall be satisfied promptly if the withdrawal is allowed or authorized.

(2) If the application states that the use of water in any State will be necessary to fulfill the purposes of the requested withdrawal, extension or modification, a report specifying that the applicant or using agency has acquired, or proposes to acquire, rights to the use of the water in conformity with applicable State laws and procedures relating to the control, appropriation, use and distribution of water, or whether the withdrawal is intended to reserve, pursuant to Federal law, sufficient unappropriated water to fulfill the purposes of the withdrawal. Water shall be reserved pursuant to Federal law for use in carrying out the purposes of the withdrawal only if specifically so stated in the relevant withdrawal order, as provided in § 2310.3-3(b) of this title and only to the extent needed for the purpose or purposes of the withdrawal as expressed in the withdrawal order. The applicant shall also provide proof of notification of the involved State's department of water resources when a land use is needed to carry out the purposes of the requested withdrawal will involve utilization of the water resource in a

State. As a condition to the allowance of an order reserving water, the applicant shall certify to the Secretary that it shall quantify the amount of water to be reserved by the order.

(3) An environmental assessment, an environmental impact statement or any other documents as are needed to meet the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347), and the regulations applicable thereto. The authorized officer shall participate in the development of environmental assessments or impact statements. The applicant shall designate the Bureau of Land Management as a cooperating agency and shall comply with the requirements of the regulations of the Council on Environmental Quality. The Bureau of Land Management shall, at a minimum, independently evaluate and review the final product. The following items shall either be included in the assessment or impact statement, or they may be submitted separately, with appropriate cross references.

(i) A report on the identification of cultural resources prepared in accordance with the requirements of 36 CFR part 800, and other applicable regulations.

(ii) An identification of the roadless areas or roadless islands having wilderness characteristics, as described in the Wilderness Act of 1964 (16 U.S.C. 1131, *et seq.*), which exist within the area covered by the requested withdrawal action.

(iii) A mineral resource analysis prepared by a qualified mining engineer, engineering geologist or geologist which shall include, but shall not be limited to, information on: General geology, known mineral deposits, past and present mineral production, mining claims, mineral leases, evaluation of future mineral potential and present and potential market demands.

(iv) A biological assessment of any listed or proposed endangered or threatened species, and their critical habitat, which may occur on or in the vicinity of the involved lands, prepared in accordance with the provisions of section 7 of the Endangered Species Act of 1973, as amended (16

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ble thereto. If the Secretary determines that assessment is required by law.

(v) An analysis of the economic impact of the proposed uses and changes in use associated with the requested action on individuals, local communities, State and local government interests, the regional economy and the Nation as a whole.

(vi) A statement as to the extent and manner in which the public participated in the environmental review process.

(4) A statement with specific supporting data, as to:

(i) Whether the lands involved are floodplains or are considered wetlands; and

(ii) Whether the existing and proposed uses would affect or be affected by such floodplains or wetlands and, if so, to what degree and in what manner. The statement shall indicate whether, if the requested action is allowed, it will comply with the provisions of Executive Orders 11988 and 11990 of May 24, 1977 (42 FR 26951; 26961).

(5) A statement of the consultation which has been or will be conducted with other Federal departments or agencies; with regional, State and local Government bodies; and with individuals and nongovernmental groups regarding the requested action.

(c) Prior to final action being taken in connection with an application, the applicant shall prepare, with the guidance and participation of the authorized officer, and subject to the approval of the authorized officer, the Secretary and other affected departments, agencies or offices, a resource management plan and implementation program regarding the use and management of any public lands with their related resources uses. Consideration shall be given to the impact of the proposed reservation on access to and the use of the land areas that are located in the vicinity of the lands proposed to be withdrawn. Where appropriate, the plan and program will be implemented by means of a memorandum of understanding between the affected agencies. Any allocation of jurisdiction between the Secretary and

legislation. In those cases where the Secretary, acting through the Bureau of Land Management, would continue to exercise partial jurisdiction, resource management of withdrawn areas may be governed by the issuance of management decisions by the Bureau of Land Management to implement land use plans developed or revised under the land use planning requirements of section 202 of the Act (43 U.S.C. 1712).

(d) In regard to national defense withdrawals that can only be made by an Act of Congress, and to the extent that they are not otherwise satisfied by the information, studies, analyses and reports provided in accordance with the provisions of this section, the provisions of section 3(7) of the Act of February 28, 1958 (43 U.S.C. 157(7)), shall be complied with.

(e) The authorized officer shall develop preliminary findings and recommendations to be submitted to the Secretary, advise the applicant of the findings and recommendations, and provide the applicant an opportunity to discuss any objections thereto which the applicant may have.

(f) Following the discussion process, or in the absence thereof, the authorized officer shall prepare the findings, keyed specifically to the relevant portions of the case file, and the recommendations to the Secretary in connection with the application. The authorized officer also shall prepare, for consideration by the Secretary, a proposed order or notice of denial. In the case of a national defense withdrawal which can only be made by an Act of Congress, the authorized officer shall prepare, with the cooperation of the applicant, a draft legislative proposal to implement the applicant's withdrawal request, together with proposed recommendations for submission by the Secretary to the Congress. The findings and recommendations of the authorized officer, and the other documents previously specified in this section to be prepared by the authorized officer shall be made a part of the case file. The case file shall then be sent to the Director, Bureau of Land

tions of the authorized officer shall be sent to the applicant.

(1) If the applicant objects to the authorized officer's findings and recommendations to the Secretary, the applicant may, within 30 days of the receipt by the applicant of notification thereof, state its objections in writing and request the Director to review the authorized officer's findings and recommendations. The applicant shall be advised of the Director's decision within 30 days of receipt of the applicant's statement of objections in the Bureau of Land Management's Washington office. The applicant's statement of objections and the Director's decision shall be made a part of the case file and thereafter the case file shall be submitted to the Secretary.

(2) If the applicant disagrees with the decision of the Director, Bureau of Land Management, the applicant may, within 30 days of receipt by the applicant of the Director's decision, submit to the Secretary a statement of reasons for disagreement. The statement shall be considered by the Secretary together with the findings and recommendations of the authorized officer, the applicant's statement of objections, the decision of the Director, the balance of the case file and such additional information as the Secretary may request.

§ 2310.3-3 Action by the Secretary: Public land orders and notices of denial.

(a) Except for national defense withdrawals which can only be made by an Act of Congress, and except as may be otherwise provided in section 1(d) of Executive Order 10355 (17 FR 4833), for applications that are subject to that order, the allowance or denial, in whole or in part, of a withdrawal, modification or extension application, may only be made by the Secretary.

(b)(1) Before the allowance of an application, in whole or in part, the Secretary shall first approve all applicable memoranda of understanding and the applicant shall make all certifications required in this part. When an application has been finally allowed, in whole or in part, by the Secretary, an order to that effect shall be published promptly in the Federal Register. Each order shall be designated as,

and shall be signed by the Secretary and issued in the form of, a *public land order*. Water shall be reserved pursuant to Federal law for use in carrying out the purposes of the withdrawal only if specifically so stated in the relevant public land order. In appropriate cases, the public land order also shall refer to the memorandum of understanding discussed in § 2310.3-2(c) of this title and shall be drawn to comply with § 2310.3-6 of this title.

(2) On the same day an order withdrawing 5,000 or more acres in the aggregate is signed, the Secretary shall advise, in writing, each House of the Congress, or in the case of an emergency withdrawal, the appropriate Committee of each House, of the withdrawal action taken. Pursuant to the Secretary's authority under the act, the notices that are sent to the Congress shall be accompanied by the information required by section 204(c)(2) of the Act (43 U.S.C. 1714(c)(2)), except in the case of an emergency withdrawal, transmittal of the required information may be delayed as provided in § 2310.5(c) of this title.

(c) When the action sought in an application involves the exercise by the Secretary of authority delegated by Executive Order 10355 (17 FR 4831) and the Secretary denies the application in whole or in part, the applicant shall be notified of the reasons for the Secretary's decision. The decision shall be subject to further consideration only if the applicant informs the Secretary, in writing, within 15 days of the receipt by the applicant of the Secretary's decision, that the applicant has submitted the matter to the Office of Management and Budget for consideration and adjustment, as provided for in section 1(d) of the Executive Order.

(d) A withdrawal application shall be denied, if, in the opinion of the Secretary, the applicant is attempting to circumvent the Congressional review provisions of section 204(c)(1) of the Act (43 U.S.C. 1714(c)(1)) concerning withdrawals of 5,000 or more acres in the aggregate.

(e) When an application is denied in its entirety by the Secretary, a notice to that effect, signed by the Secretary,

shall be published promptly in the Federal Register.

(f) In the case of a national defense withdrawal that may only be made by an Act of Congress, the Secretary shall transmit to the Congress proposed legislation effecting the withdrawal requested, together with the recommendations of the Secretary which may or may not support the proposed legislation in whole or in part. The proposed legislation shall contain such provisions for continued operation of the public land laws as to the public land areas included in the requested withdrawal as shall be determined by the Secretary to be compatible with the intended military use.

§ 2310.3-4 Duration of withdrawals.

(a) An order initially withdrawing 5,000 or more acres of land in the aggregate, on the basis of the Secretary's authority under section 204 of the Act (43 U.S.C. 1714), may be made for a period not to exceed 20 years from the date the order is signed, except that withdrawals exceeding 5,000 acres in the State of Alaska shall not become effective until notice is provided in the Federal Register and to both Houses of Congress. All orders withdrawing 5,000 or more acres in the aggregate shall be subject to the Congressional review provision of section 204(c) of the Act (43 U.S.C. 1714(c)), except as follows:

(1) A National Wildlife Refuge System withdrawal may not be terminated as provided in section 204(c)(1) of the Act (43 U.S.C. 1714(c)(1)) other than by an Act of Congress; or

(2) A withdrawal exceeding 1,000 acres in the State of Alaska shall terminate unless Congress passes a Joint Resolution of approval within 1 year after the notice of such withdrawal has been submitted to the Congress.

(b) An order initially withdrawing less than 5,000 acres of land, in the aggregate, on the basis of the Secretary's authority under section 204 of the Act (43 U.S.C. 1714), may be made:

(1) For such time as the Secretary determines desirable for a resource use;

(2) For not more than 20 years for any other use, including, but not limited to, the use of lands for non-re-

source uses, related administrative sites and facilities or for other proprietary purposes; or

(3) For not more than 5 years to preserve the lands for a specific use then under consideration by either House of Congress.

(c) An order withdrawing lands on the basis of an emergency as provided for in section 204(c) of the Act (43 U.S.C. 1714(c)) may be made for not more than 3 years.

(d) Except for emergency withdrawals, withdrawals of specific duration may be extended, as provided for in § 2310.4 of this title.

§ 2310.3-5 Compensation for improvements.

(a) When an application is allowed, the applicant shall compensate the holder of record of each permit, license or lease lawfully terminated or revoked after the allowance of an application, for all authorized improvements placed on the lands under the terms and conditions of the permit, license or lease, before the lands were segregated or withdrawn. The amount of such compensation shall be determined by an appraisal as of the date of revocation or termination of the permit, license or lease, but shall not exceed fair market value. To the extent such improvements were constructed with Federal funds, they shall not be compensable unless the United States has been reimbursed for such funds prior to the allowance of the application and then only to the extent of the sum that the United States has received.

(b) When an application is allowed that affect public lands which are subject to permits or leases for the grazing of domestic livestock and that is required to be terminated, the applicant shall comply with the cancellation notice and compensation requirements of section 402(g) of the Act (43 U.S.C. 1752(g)), to the extent applicable.

§ 2310.3-6 Transfer of jurisdiction.

A public land order that reserves lands for a department, agency or office, shall specify the extent to which jurisdiction over the lands and

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their related resource uses will be exercised by that department, agency or office. (See § 2310.3-2(c) of this title).

§ 2310.1 Review and extensions of withdrawals.

(a) Discretionary withdrawals of specific duration, whether made prior to or after October 21, 1976, shall be reviewed by the Secretary commencing at least 2 years before the expiration date of the withdrawal. When requested, the department, agency or office benefitting from the withdrawal shall promptly provide the Secretary with the information required by § 2310.1-2(c) of this title, and the information required by § 2310.3-2(b) of this title, in the form of a withdrawal extension application with supplemental information. If the concerned department, agency or office is delinquent in responding to such request, the delinquency shall constitute a ground for not extending the withdrawal. Such withdrawals may be extended or further extended only upon compliance with these regulations, and only if the Secretary determines that the purpose for which the withdrawal was first made requires the extension, and then only for a period that shall not exceed the duration of the original withdrawal period. In allowing an extension, the Secretary shall comply with the provisions of section 204(c) of the Act (43 U.S.C. 1714(c)), or section 204(d) of the Act (43 U.S.C. 1714(d)), whichever is applicable; and, whether or not an extension is allowed, the Secretary shall report promptly on the decision for each pending extension to the Congressional Committees that are specified in section 204(f) of the Act (43 U.S.C. 1714(f)).

(b) Notwithstanding the provisions of this section, if the Secretary determines that a National Wildlife Refuge System withdrawal of specific duration shall not be extended, the Secretary shall nevertheless extend or reextend the withdrawal until such time as the withdrawal is terminated by an Act of Congress.

§ 2310.5 Special action on emergency withdrawals.

(a) When the Secretary determines, or when either one of the two Com-

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mittees of the Congress that are specified in section 204(e) of the Act (43 U.S.C. 1714(e)) notifies the Secretary, that an emergency exists and that extraordinary measures need to be taken to protect natural resources or resource values that otherwise would be lost, the Secretary shall immediately make a withdrawal which shall be limited in its scope and duration to the emergency. An emergency withdrawal shall be effective when signed, shall not exceed 3 years in duration and may not be extended by the Secretary. If it is determined that the lands involved in an emergency withdrawal should continue to be withdrawn, a withdrawal application should be submitted to the Bureau of Land Management in keeping with the normal procedures for processing a withdrawal as provided for in this subpart. Such applications will be subject to the provisions of section 204(c) of the Act (43 U.S.C. 1714(c)), or section 204(d) of the Act (43 U.S.C. 1714(d)), whichever is applicable, as well as section 204(b)(1) of the Act (43 U.S.C. 1714(b)(1)).

(b) When an emergency withdrawal is signed, the Secretary shall on the same day, send a notice of the withdrawal to the two Committees of the Congress that are specified for that purpose in section 204(e) of the Act (43 U.S.C. 1714(e)).

(c) The Secretary shall forward a report to each of the aforementioned committees within 90 days after filing with them the notice of emergency withdrawal. Reports for all such withdrawals, regardless of the amount of acreage withdrawn, shall contain the information specified in section 204(c)(2) of the Act (43 U.S.C. 1714(c)(2)).

Subpart 2320—Federal Energy Regulatory Commission Withdrawals

§ 2320.0-3 Authority.

(a) Section 24 of the Federal Power Act of June 10, 1920, as amended (16 U.S.C. 818), provides that any lands of the United States included in an application for power development under that Act shall, from the date of filing of an application therefor, be reserved

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from entry, location or other disposal under the laws of the United States until otherwise directed by the Federal Energy Regulatory Commission or by Congress. This statute also provides that whenever the Commission shall determine that the value of any lands of the United States withdrawn or classified for power purposes shall not be injured or destroyed for such purposes by location, entry or selection under the public land laws, the Secretary of the Interior shall declare such lands open to location, entry or selection for such purposes under such restrictions as the Commission may determine are necessary, and subject to and with a reservation of the right of the United States or its permittees or licensees to enter upon, occupy and use any and all of the lands for power purposes. Before any lands are declared open to location, entry or selection, the Secretary shall give notice of his intention to make this declaration to the Governor of the State within which such lands are located, and the State shall have a preference for a period of 90 days from the date of this notice to file under any applicable law or regulation an application of the State, or any political subdivision thereof, for any lands required as a right-of-way for a public highway or as a source of materials for the construction and maintenance of such highways. The 90-day preference does not apply to lands which remain withdrawn for national forest or other purposes.

(b) The Mining Claims Rights Restoration Act of 1955 (30 U.S.C. 621 et seq.), opened public lands which were then, or thereafter, withdrawn or classified for power purposes, with specified exceptions, to mineral location and development under certain circumstances.

§ 2320.1 Lands considered withdrawn or classified for power purposes.

The following classes of lands of the United States are considered as withdrawn or classified for the purposes of section 24 of the Federal Power Act (16 U.S.C. 818): Lands withdrawn for power reserves under sections 1 and 2 of the Act of June 25, 1910, as amended (43 U.S.C. 141-144); lands in-

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cluded in an application for power development under the Federal Power Act (16 U.S.C. 818); lands classified for power purposes under the Act of March 3, 1879 (43 U.S.C. 31); lands designated as valuable for power purposes under the Act of June 25, 1910, as amended (43 U.S.C. 148); the Act of June 9, 1916 (39 Stat. 218, 219), and the Act of February 26, 1919 (40 Stat. 1178, 1180); lands within final hydroelectric power permits under the Act of February 15, 1901 (43 U.S.C. 959); and lands within transmission line permits or approved rights-of-way under the aforementioned Act of February 15, 1901, or the Act of March 4, 1911 (43 U.S.C. 961).

§ 2320.2 General determinations under the Federal Power Act.

(a) On April 22, 1922, the Federal Power Commission (as predecessor to the Federal Energy Regulatory Commission) made a general determination "that where lands of the United States have heretofore been or hereafter may be reserved or classified as power sites, such reservation or classification being made solely because such lands are either occupied by power transmission lines or their occupancy and use for such purposes have been applied for or authorized under appropriate laws of the United States, and such lands have otherwise no value for power purposes, and are not occupied in trespass, the Commission determines that the value of such lands so reserved or classified or so applied for or authorized, shall not be injured or destroyed for the purposes of power development by location, entry or selection under the public land laws, subject to the reservation of section 24 of the Federal Power Act."

(b) The regulations governing mining locations on lands withdrawn or classified for power purposes, including lands that have been restored and opened to mining locations under section 24 of the Federal Power Act, are contained in subpart 3730 and in Group 3800 of this title.

§ 2320.3 Applications for restoration.

(a) Other than with respect to na-

restoration and opening of lands withdrawn or classified for power purposes under the provisions of section 24 of the Federal Power Act shall be filed, in duplicate, in the proper office of the Bureau of Land Management as set forth in § 2321.2-1 of this title. No particular form of application is required, but it shall be typewritten or in legible handwriting, and it shall contain the information required by 18 CFR 25.1. Each application shall be accompanied by a service charge of \$10 which is not returnable.

(b) Favorable action upon an application for restoration shall not give the applicant any preference right when the lands are opened.

PART 2360—NATIONAL PETROLEUM RESERVE IN ALASKA

Subpart 2361—Management and Protection of the National Petroleum Reserve in Alaska

Sec.

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Subpart 2361—Management and Protection of the National Petroleum Reserve in Alaska

SOURCE: 42 FR 28721, June 3, 1977, unless otherwise noted.

§ 2361.0-1 Purpose.

The purpose of the regulations in this subpart is to provide procedures for the protection and control of environmental, fish and wildlife, and historical or scenic values in the National Petroleum Reserve in Alaska pursuant to the provisions of the Naval Petroleum Reserves Production Act of 1976 (90 Stat. 303; 42 U.S.C. 6501 *et seq.*).

§ 2361.0-2 Objectives.

The objective of this subpart is to provide for the protection of the environmental, fish and wildlife, and historical or scenic values of the Reserve

so that activities which are or might be detrimental to such values will be carefully controlled to the extent consistent with the requirements of the Act for petroleum exploration of the reserve.

§ 2361.0-3 Authority.

The Naval Petroleum Reserve Production Act of 1976 (90 Stat. 303, 42 U.S.C. 6501, *et seq.*) is the statutory authority for these regulations.

§ 2361.0-4 Responsibility.

(a) The Bureau of Land Management (BLM) is responsible for the surface management of the reserve and protection of the surface values from environmental degradation, and to prepare rules and regulations necessary to carry out surface management and protection duties.

(b) The U.S. Geological Survey is responsible for management of the continuing exploration program during the interim between the transfer of jurisdiction from the U.S. Navy to the U.S. Department of the Interior and the effective date of any legislation for a permanent development and production program to enforce regulations and stipulations which relate to the exploration of petroleum resources of the Reserve, and to operate the South Barrow gas field or such other fields as may be necessary to supply gas at reasonable and equitable rates to the Native village of Barrow and other communities and installations at or near Point Barrow, Alaska, and to installations of the Department of Defense and other agencies of the U.S. located at or near Point Barrow, Alaska.

§ 2361.0-5 Definitions.

As used in this subpart, the following terms shall have the following meanings:

(a) *Act* means the Naval Petroleum Reserves Production Act of 1976 (90 Stat. 303, 42 U.S.C. 6501, *et seq.*).

(b) *Authorized officer* means any employee of the Bureau of Land Management who has been delegated the authority to perform the duties of this subpart.

(c) *Exploration* means activities conducted on the Reserve for the purpose of evaluating petroleum resources which include crude oil, gases of all kinds (natural gas, hydrogen, carbon dioxide, helium, and any others), natural gasoline, and related hydrocarbons (tar sands, asphalt, propane butane, etc.), oil shale and the products of such resources.

(d) *Reserve* means those lands within the National Petroleum Reserve in Alaska (prior to June 1, 1977, designated Naval Petroleum Reserve No. 4) which was established by Executive order of the President, dated February 27, 1923, except for tract Numbered 1 as described in Public Land Order 2344 (the Naval Arctic Research Laboratory—surface estate only) dated April 24, 1961.

(e) *Secretary* means the Secretary of the Interior.

(f) *Special areas* means areas within the reserve identified by the Secretary of the Interior as having significant subsistence, recreational, fish and wildlife, or historical or scenic value and, therefore, warranting maximum protection of such values to the extent consistent with the requirements of the Act for the exploration of the Reserve.

(g) *Use authorization* means a written approval of a request for use of land or resources.

§ 2361.0-6 [Reserved]

§ 2361.0-7 Effect of Law.

(a) Subject to valid existing rights, all lands within the exterior boundaries of the Reserve are reserved and withdrawn from all forms of entry and disposition under the public land laws, including the mining and mineral leasing laws, and all other Acts.

(b) Notwithstanding the provisions of paragraph (a) of this section, the Secretary is authorized to:

(1) Make dispositions of mineral materials pursuant to the Act of July 31, 1947 (61 Stat. 681), as amended (30 U.S.C. 601), for appropriate use by Alaska Natives.

(2) Make such dispositions of mineral materials and grant such rights-of-way, licenses, and permits as may be

necessary to carry out his responsibilities under the Act.

(3) Convey the surface of lands properly selected on or before December 18, 1975, by Native village corporations pursuant to the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1601, *et seq.*).

(c) All other provisions of law heretofore enacted and actions heretofore taken reserving such lands as a Reserve shall remain in full force and effect to the extent not inconsistent with the Act.

(d) To the extent not inconsistent with the Act, all other public land laws are applicable.

§ 2361.1 Protection of the environment.

(a) The authorized officer shall take such action, including monitoring, as he deems necessary to mitigate or avoid unnecessary surface damage and to minimize ecological disturbance throughout the reserve to the extent consistent with the requirements of the Act for the exploration of the reserve.

(b) The Cooperative Procedures of January 18, 1977, for National Petroleum Reserve in Alaska between the Bureau of Land Management (BLM) and the U.S. Geological Survey (GS) (42 FR 4542, January 25, 1977) provides the procedures for the mutual cooperation and interface of authority and responsibility between GS and BLM concerning petroleum exploration activities (i.e., geophysical and drilling operations), the protection of the environment during such activities in the Reserve, and other related activities.

(c) Maximum protection measures shall be taken on all actions within the Utkok River Uplands, Colville River, and Teshekpuk Lake special areas, and any other special areas identified by the Secretary as having significant subsistence, recreational, fish and wildlife, or historical or scenic value. The boundaries of these areas and any other special areas identified by the Secretary shall be identified on maps and be available for public inspection in the Fairbanks District Office. In addition, the legal description of the three special areas design-

nated herein and any new areas identified hereafter will be published in the Federal Register and appropriate local newspapers. Maximum protection may include, but is not limited to, requirements for:

- (1) Rescheduling activities and use of alternative routes, (2) types of vehicles and loadings, (3) limiting types of aircraft in combination with minimum flight altitudes and distances from identified places, and (4) special fuel handling procedures.

(d) Recommendations for additional special areas may be submitted at any time to the authorized officer. Each recommendation shall contain a description of the values which make the area special, the size and location of the area on appropriate USGS quadrangle maps, and any other pertinent information. The authorized officer shall seek comments on the recommendations from interested public agencies, groups, and persons. These comments shall be submitted along with his recommendation to the Secretary. Pursuant to section 104(b) of the Act, the Secretary may designate that area(s) which he determines to have special values requiring maximum protection. Any such designated area shall be identified in accordance with the provision of § 2361.1(c) of this subpart.

(e) (1) To the extent consistent with the requirements of the Act and after consultation with appropriate Federal, State, and local agencies and Native organizations, the authorized officer may limit, restrict, or prohibit use of and access to lands within the Reserve, including special areas. On proper notice as determined by the authorized officer, such actions may be taken to protect fish and wildlife breeding, nesting, spawning, lambing of calving activity, major migrations of fish and wildlife, and other environmental, scenic, or historic values.

(2) The consultation requirement in § 2361.1(e)(1) of this subpart is not required when the authorized officer determines that emergency measures are required.

(f) No site, structure, object, or other values of historical archaeological, cultural, or paleontological character including but not limited to historic

ic and prehistoric remains, fossils, and artifacts, shall be injured, altered, destroyed, or collected without a current Federal Antiquities permit.

§ 2361.2 Use authorizations.

(a) Except for petroleum exploration which has been authorized by the Act, use authorizations must be obtained from the authorized officer prior to any use within the Reserve. Only those uses which are consistent with the purposes and objectives of the Act will be authorized.

(b) Except as may be limited, restricted, or prohibited by the authorized officer pursuant to § 2361.1 of this subpart or otherwise, use authorizations are not required for (1) subsistence uses (e.g., hunting, fishing, and berry picking) and (2) recreational uses (e.g., hunting, fishing, backpacking, and wildlife observation).

(c) Applications for use authorizations shall be filed in accordance with applicable regulations in this chapter. In the absence of such regulation, the authorized officer may make such dispositions absence of such regulations, the author of mineral materials and grant such rights-of-way, licenses, and permits as may be necessary to carry out his responsibilities under the Act.

(d) In addition to other statutory or regulatory requirements, approval of applications for use authorizations shall be subject to such terms and conditions which the authorized officer determines to be necessary to protect the environmental, fish and wildlife, and historical or scenic values of the Reserve.

§ 2361.3 Unauthorized use and occupancy.

Any person who violates or fails to comply with regulations of this subpart is subject to prosecution, including trespass and liability for damages, pursuant to the appropriate laws.

PART 2370—RESTORATIONS AND REVOCATIONS

Subpart 2370—Restorations and Revocations; General

Sec.
2370.0-1 Purpose.
2370.0-3 Authority.

Bureau of Land Management, Interior

Sec.

Subpart 2372—Procedures

2372.1 Notice of intention to relinquish action by holding agency.

2372.2 Report to General Services Administration.

2372.3 Return of lands to the public domain; conditions.

Subpart 2374—Acceptance of Jurisdiction by BLM

2374.1 Property determinations.

2374.2 Conditions of acceptance by BLM.

AUTHORITY: 63 Stat. 377 as amended, R.S. 2476; 40 U.S.C. 472, 43 U.S.C. 1201.

Subpart 2370—Restorations and Revocations; General

§ 2370.0-1 Purpose.

The regulations of this part 2370 apply to lands and interests in lands withdrawn or reserved from the public domain, except lands reserved or dedicated for national forest or national park purposes, which are no longer needed by the agency for which the lands are withdrawn or reserved.

(35 FR 9558, June 13, 1970)

§ 2370.0-3 Authority.

The Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended, governs the disposal of surplus Federal lands or interests in lands. Section 3 of that Act (40 U.S.C. 472), as amended, February 28, 1958 (72 Stat. 29), excepts from its provisions the following:

(a) The public domain.
(b) Lands reserved or dedicated for national forest or national park purposes.

(c) Minerals in lands or portions of lands withdrawn or reserved from the public domain which the Secretary of the Interior determines are suitable for disposition under the public land mining and mineral leasing laws.

(d) Lands withdrawn or reserved from the public domain, but not including lands or portions of lands so withdrawn or reserved which the Secretary of the Interior, with the concurrence of the Administrator of the General Services Administration, determines are not suitable for return to

under the general public-land laws, because such lands are substantially changed in character by improvements or otherwise.

(35 FR 9558, June 13, 1970)

Subpart 2372—Procedures

SOURCE: 35 FR 9558, June 13, 1970, unless otherwise noted.

§ 2372.1 Notice of intention to relinquish action by holding agency.

(a) Agencies holding withdrawn or reserved lands which they no longer need will file, in duplicate, a notice of intention to relinquish such lands in the proper office (see § 1821.2-1 of this chapter).

(b) No specific form of notice is required, but all notices must contain the following information:

(1) Name and address of the holding agency.
(2) Citation of the order which withdrew or reserved the lands for the holding agency.

(3) Legal description and acreage of the lands, except where reference to the order of withdrawal or reservation is sufficient to identify them.

(4) Description of the improvements existing on the lands.

(5) The extent to which the lands are contaminated and the nature of the contamination.

(6) The extent to which the lands have been decontaminated or the measures taken to protect the public from the contamination and the proposals of the holding agency to maintain protective measures.

(7) The extent to which the lands have been changed in character other than by construction of improvements.

(8) The extent to which the lands or resources thereon have been disturbed and the measures taken or proposed to be taken to recondition the property.

(9) If improvements on the lands have been abandoned, a certification that the holding agency has exhausted General Services Administration procedures for their disposal and that the improvements are without value.

(10) A description of the easements

the holding agency or its predecessors have granted covering the lands.

(11) A list of the terms and conditions if any, which the holding agency deems necessary to be incorporated in any further disposition of the lands in order to protect the public interest.

(12) Any information relating to the interest of other agencies or individuals in acquiring use of or title to the property or any portion of it.

(13) Recommendations as to the further disposition of the lands, including where appropriate, disposition by the General Services Administration.

§ 2372.2 Report to General Services Administration.

The holding agency will send one copy of its report on unneeded lands to the appropriate regional office of the General Services Administration for its information.

§ 2372.3 Return of lands to the public domain; conditions.

(a) When the authorized officer of the Bureau of Land Management determines the holding agency has complied with the regulations of this part, including the conditions specified in § 2374.2 of this subpart, and that the lands or interests in lands are suitable for return to the public domain for disposition under the general public land laws, he will notify the holding agency that the Department of the Interior accepts accountability and responsibility for the property, sending a copy of this notice to the appropriate regional office of the General Services Administration.

(b) (Reserved)

Subpart 2374—Acceptance of Jurisdiction by BLM

§ 2374.1 Property determinations.

(a) When the authorized officer of the Bureau of Land Management determines that the holding agency has complied with the regulations of this part and that the lands or interests in lands other than minerals are not suitable for return to the public domain for disposition under the general public land laws, because the lands are substantially changed in character by improvements or otherwise, he will re-

quest the appropriate officer of the General Services Administration, or its delegate, to concur in his determination.

(b) When the authorized officer of the Bureau of Land Management determines that minerals in lands subject to the provisions of paragraph (a) of this section are not suitable for disposition under the public land mining or mineral leasing laws, he will notify the appropriate officer of the General Services Administration or its delegate of this determination.

(c) Upon receipt of the concurrence specified in paragraph (a) of this section, the authorized officer of the Bureau of Land Management will notify the holding agency to report as excess property the lands and improvements therein, or interests in lands to the General Services Administration pursuant to the regulations of that Administration. The authorized officer of the Bureau of Land Management will request the holding agency to include minerals in its report to the General Services Administration only when the provisions of paragraph (b) of this section apply. He will also submit to the holding agency, for transmittal with its report to the General Services Administration, information of record in the Bureau of Land Management on the claims, if any, by agencies other than the holding agency of primary, joint, or secondary jurisdiction over the lands and on any encumbrances under the public land laws.

(35 FR 9559, June 13, 1970)

§ 2374.2 Conditions of acceptance by BLM.

Agencies will not be discharged of their accountability and responsibility under this section unless and until:

(a) The lands have been decontaminated of all dangerous materials and have been restored to suitable condition or, if it is uneconomical to decontaminate or restore them, the holding agency posts them and installs protective devices and agrees to maintain the notices and devices.

(b) To the extent deemed necessary by the authorized officer of the Bureau of Land Management, the

holding agency has undertaken or agrees to undertake or to have undertaken appropriate land treatment measures correcting, arresting, or preventing deterioration of the land and resources thereof which has resulted or may result from the agency's use or possession of the lands.

(c) The holding agency, in respect to improvements which are of no value, has exhausted General Services Administration's procedures for their disposal and certifies that they are of no value.

(d) The holding agency has resolved, through a final grant or denial, all commitments to third parties relative to rights and privileges in and to the lands or interests therein.

(e) The holding agency has submitted to the appropriate office mentioned in paragraph (a) of § 2372.1 a copy of, or the case file on, easements, leases, or other encumbrances with which the holding agency or its predecessors have burdened the lands or interests therein.

(35 FR 9559, June 13, 1970)

Group 2400—Land Classification

PART 2400—LAND CLASSIFICATION

Subpart 2400—Land Classification; General

Sec.

2400.0-2 Objectives.

2400.0-3 Authority.

2400.0-4 Responsibility.

2400.0-5 Definitions.

Source: 35 FR 9559, June 13, 1970, unless otherwise noted.

Subpart 2400—Land Classification; General

§ 2400.0-2 Objectives.

The statutes cited in § 2400.0-3 authorize the Secretary of the Interior to classify or otherwise take appropriate steps looking to the disposition of public lands, and on an interim basis, to classify public lands for retention and management, subject to requirements of the applicable statutes. In addition to any requirements of law, it is the policy of the Secretary (a) to specify those criteria which will be considered in the exercise of his au-

thority and (b) to establish procedures which will permit the prompt and efficient exercise of his authority with, as far as is practicable, the knowledge and participation of the interested parties, including the general public. Nothing in these regulations is meant to affect applicable State laws governing the appropriation and use of water, regulation of hunting and fishing or exercise of any police power of the State.

§ 2400.0-3 Authority.

(a) All vacant public lands, except those in Alaska, have been, with certain exceptions, withdrawn from entry, selection, and location under the nonmineral land laws by Executive Order 9910, of November 26, 1934, and Executive Order 6964 of February 5, 1935, and amendments thereto, and by the establishment of grazing districts under section 1 of the Act of June 28, 1934 (48 Stat. 1269), as amended (43 U.S.C. 315). Section 7 of the Act of June 28, 1934 (48 Stat. 1272), as amended (43 U.S.C. 315f), authorizes the Secretary of the Interior in his discretion to examine and classify and open to entry, selection, or location under applicable law any lands withdrawn or reserved by Executive Order 6910 of November 26, 1934, or Executive Order 6964 of February 5, 1935, and amendments thereto, or within a grazing district established under that act which he finds are more valuable or suitable for the production of agricultural crops than for the production of native grasses and forage plants, or more valuable or suitable for any other use than for the use provided for under said act, or proper for acquisition in satisfaction of any outstanding lien, exchange, or scrip rights or land grant. Classification under section 7 is a prerequisite to the approval of all entries, selections, or locations under the following subparts of this chapter, except as they apply to Alaska and with certain other exceptions: Original, Additional, Second, and Adjoining Farm Homesteads—subparts 2511, 2512, and 2513; Enlarged Homestead—subpart 2514; Indian Allotments—part 2530; Desert Land Entries—part 2520; Recreation and

APPENDIX J
NOTICES OF INTENT

[ID-933-1430-01; IDI-31741]

**Notice of Proposed Withdrawal and
Opportunity for Public Meeting; Idaho**

AGENCY: Bureau of Land Management,
Interior.

ACTION: Notice.

SUMMARY: The Department of the Air
Force proposes to withdraw 11,583.34

acres under Alternative Site No. 1 or
9,673.34 acres under Alternative Site
No. 2 of public land for protection of the
Mountain Home Air Force Base
Enhanced Training in Idaho (ETI) site.
This notice closes the lands for up to
two years from surface entry, mining,
and mineral leasing.

DATES: Comments and requests for a
public meeting must be received by July
8, 1996.

ADDRESSES: Comments and meeting
requests should be sent to the Idaho
State Director, BLM, 3380 Americana
Terrace, Boise, Idaho 83706-2500.

FOR FURTHER INFORMATION CONTACT:
Howard Hedrick (208-384-3197) or
David Brunner (208-384-3056), BLM
Idaho State Office.

SUPPLEMENTARY INFORMATION: On March
29, 1996, the Department of the Air
Force filed an application to withdraw
the following described public lands
from settlement, sale, location, or entry
under the general land laws, including
the United States mining laws (30
U.S.C. Ch. 2 (1988)) and the mineral
leasing laws, subject to valid existing
rights:

Boise Meridian

**(Alternative Site No. 1)—Proposal: Clover
Butte Drop Zone**

T. 12 S., R. 8 E.,
Sec. 10, SE $\frac{1}{4}$ SE $\frac{1}{4}$;
Sec. 11, S $\frac{1}{2}$ S $\frac{1}{2}$;
Sec. 12, S $\frac{1}{2}$ S $\frac{1}{2}$;
Sec. 13;
Sec. 14;
Sec. 15, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 22, E $\frac{1}{2}$ E $\frac{1}{2}$;
Secs. 23 to 26 inclusive;
Sec. 27, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 34, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 35.
T. 12 S., R. 9 E.,
Sec. 7, lot 4, SE $\frac{1}{4}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
Sec. 8, S $\frac{1}{2}$ S $\frac{1}{2}$;
Secs. 17 to 20 inclusive;
Secs. 29 to 32 inclusive.

(No Drop Zone)

T. 11 S., R. 4 E.,
Sec. 23, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.
T. 9 S., R. 6 E.,
T. 13 S., R. 4 E.,
Sec. 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$

Emitters

T. 8 S., R. 9 E.,
Sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.
T. 9 S., R. 6 E.,
Sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 4 E.,
Sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 5 E.,
Sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 3 E.,
Sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 10 E.,
Sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot
4.
T. 13 S., R. 9 E.,

Sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$.

The areas described aggregate 11,583.34
acres in Owyhee County.

**(Alternative Site No. 2)—Proposal: Grasmere
Drop Zone**

T. 11 S., R. 4 E.,
Secs. 25 to 27 inclusive;
Sec. 34, N $\frac{1}{2}$ SE $\frac{1}{4}$ and E $\frac{1}{2}$ SW $\frac{1}{4}$;
Sec. 35.
T. 11 S., R. 5 E.,
Sec. 30, lots 1 to 4 inclusive;
Sec. 31, lots 1 to 4 inclusive.
T. 12 S., R. 4 E.,
Secs. 1 to 4 inclusive;
Sec. 9;
Sec. 10, NW $\frac{1}{4}$, S $\frac{1}{2}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ and
SE $\frac{1}{4}$ NE $\frac{1}{4}$;
Sec. 11, S $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ and
NE $\frac{1}{4}$ NW $\frac{1}{4}$;
Sec. 12;
Sec. 13, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$,
N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, and
N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$;
Sec. 14, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$,
N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$,
N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$;
Sec. 15, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$,
N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$,
N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$.

(No Drop Zone)

T. 12 S., R. 9 E.,
Sec. 20, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 9 S., R. 6 E.,
Sec. 21.
T. 13 S., R. 4 E.,
Sec. 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$.

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(Emitters)

- T. 8 S., R. 9 E.,
Sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.
T. 9 S., R. 6 E.,
Sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 4 E.,
Sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 5 E.,
Sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 3 E.,
Sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 10 E.,
Sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot
4.
T. 13 S., R. 9 E.,
Sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

The areas described aggregate 9,673.34
acres in Owyhee County.

The purpose of the proposed
withdrawal is to protect the Mountain
Home Air Force Base Enhanced
Training in Idaho site.

This withdrawal will be authorized
under the Act of February 28, 1958, 43
U.S.C. 155-158 and requires legislative
action by Congress.

For a period of 90 days from the date
of publication of this notice, all persons
who wish to submit comments,
suggestions, or objections in connection
with the proposed withdrawal may
present their views in writing to the
Idaho State Director at the address
shown above.

Notice is hereby given that a public
meeting in connection with the
proposed withdrawal will be held at a
later date. A notice of the time and place
will be published in the Federal
Register and three newspapers in the
general vicinity of the lands to be
withdrawn at least 30 days before the
scheduled date of the meeting.

This application will be processed in
accordance with the regulations set
forth in 43 CFR 2300.

For a period of two years from the
date of publication of this notice in the
Federal Register, the lands will be
segregated as specified above unless the
application is denied or canceled or the
withdrawal is approved prior to that
date. The temporary land uses that will
be permitted during this segregative
period are rights-of-way, leases, permits
licenses or discretionary land use
authorizations that do not significantly
disturb the surface of the land or impair
values of the resources, but will be
coordinated with the Installation.
Commander, Mountain Home Air Force
Base, Idaho.

The temporary segregation of the
lands in connection with this
withdrawal application shall not affect
administration over the lands, and the
segregation shall not have the effect of
authorizing any use of the lands by the
Department of the Air Force.

Dated: April 2, 1996.

J. David Brunner,

Deputy State Director for Resource Services
Division.

[FR Doc. 96-8610 Filed 4-5-96; 8:45 am]

BILLING CODE 4310-GG-M

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Page 2 of 2

Category Three: representatives of State and local government, Native American tribes, academicians involved in natural sciences, employees of State agencies responsible for the management of natural resources, land, or water, and the public at large.

Individuals may nominate themselves or others. Nominees must be residents of the State of Washington. The Eastern Washington Council covers eastern Washington (with the exception of the area south of the Snake River drainages).

Nominees will be evaluated based on their experience working with Native American tribal issues and their knowledge of the geographic area covered by the Council. Nominees must also have demonstrated a commitment to collaborative resource decision making. All nominations must be accompanied by letters of reference from represented interests or organizations, a completed background information nomination form, as well as any other information that speaks to the nominee's qualifications. The BLM Oregon/Washington State Director, the Forest Service Regional Forester, and the Washington Governor's Office will forward the nominations to the Secretary of the Interior, who will make the appointment to the Council.

This nomination period will also be announced through press releases issued by the BLM Oregon/Washington State Office. Nominations for Resource Advisory Councils should be sent to: Elaine Zielinski, Bureau of Land Management, Oregon/Washington State Director, P.O. Box 2965, Portland, OR, 97208.

DATES: All nominations must be received by the BLM Oregon/Washington State Office on or before May 30, 1996.

FOR FURTHER INFORMATION CONTACT: Brenda Lincoln Wojtanik, OR 912, Bureau of Land Management, Oregon/Washington State Office, P.O. Box 2965, Portland, Oregon, 97208, (Telephone 503-952-6437).

Eric Hoffman,

Acting State Director, Oregon/Washington.

[FR Doc. 96-10626 Filed 4-29-96; 8:45 am]

BILLING CODE 4310-33-P

[Docket No. 4310-DN]

Notice of a Public Meeting; Montana, MT-060-06-1020-00

AGENCY: Bureau of Land Management, Lewistown District Office.

ACTION: Notice of meeting.

SUMMARY: The Lewistown District Advisory Council will meet May 21 and

22, 1996, at the 7 Lazy P Guest Ranch, north west of Choteau, Montana. The meeting will begin at 8 a.m. on May 21. The business of the day will include reviewing a draft letter to interest groups and individuals inquiring of the potential for creating a coordinated resource management group concerning oil and gas exploration and development along the Rocky Mountain Front; reviewing possible options to buy back, abandon, or terminate mineral leases along the Front; and a field trip to the area being considered for additional exploration.

On May 22, the meeting will begin at 8 a.m. The topics of the day will include standards and guidelines; the council's charter; the Mixed Grass Prairie ACEC; mineral exploration proposal in the Bitter Creek Wilderness Study Area; black-footed ferret/prairie dog issues; Native American participation in council activities; and the nomination process for those council positions that expire in 1996.

There will be a public comment period at 11:30 a.m. on May 22.

DATES: May 21 and 22, 1996.

LOCATION: 7 Lazy P Guest Ranch, northwest of Choteau, Montana.

FOR FURTHER INFORMATION CONTACT: District Manager, Lewistown District Office, Bureau of Land Management, P.O. Box 1160, Lewistown, MT 59457.

SUPPLEMENTARY INFORMATION: The meeting is open to the public and there will be a public comment period as detailed above.

Dated: April 16, 1996.

David L. Mari,

District Manager.

[FR Doc. 96-10645 Filed 4-29-96; 8:45 am]

BILLING CODE 4310-84-P

[D-933-1430-01; IDI-31741]

Notice of Public Meetings for Proposed Land Withdrawal: Idaho

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of public meetings.

SUMMARY: The Department of the Air Force proposes to withdraw 11,583.34 acres under Alternative Site No. 1 or 9,673.34 acres under Alternative Site No. 2 of public land from all forms of appropriation under the public land laws, mining laws and mineral leasing laws, for the Mountain Home Air Force Base Enhanced Training in Idaho (ETI) site. Several public meetings will be held to gather comments on the proposal, at the dates, times, places and addresses described in this Notice.

EFFECTIVE DATE: April 30, 1996.

FOR FURTHER INFORMATION CONTACT: Howard Hedrick, BLM Idaho State Office, 3380 Americana Terrace, Boise, Idaho 83706-2500, 208-384-3197

The Department of the Air Force proposes that 11,583.34 acres under Alternative Site No. 1 to 9,673.34 acres under Alternative Site No. 2 of public land be withdrawn for a period of 20 years to provide protection of the ETI. The lands are described as follows:

Boise Meridian

(Alternative Site No. 1)—Proposal: Clover Butte Drop Zone

T. 12 S., R. 6 E.,
Sec. 10, SE $\frac{1}{4}$ SE $\frac{1}{4}$;
Sec. 11, S $\frac{1}{2}$ S $\frac{1}{2}$;
Sec. 12, S $\frac{1}{2}$ S $\frac{1}{2}$;
Sec. 13;
Sec. 14;
Sec. 15, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 22, E $\frac{1}{2}$ E $\frac{1}{2}$;
Secs. 23 to 26 inclusive;
Sec. 27, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 34, E $\frac{1}{2}$ E $\frac{1}{2}$;
Sec. 35.
T. 12 S., R. 9 E.,
Sec. 7, lot 4, SE $\frac{1}{4}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$;
Sec. 8, S $\frac{1}{2}$ S $\frac{1}{2}$;
Secs. 17 to 20 inclusive;
Secs. 29 to 32 inclusive;

(No Drop Zone)

T. 11 S., R. 4 E.,
Sec. 23, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.
T. 9 S., R. 6 E.,
Sec. 21.
T. 13 S., R. 4 E.,
Sec. 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$.

(Emitters)

T. 8 S., R. 9 E.,
Sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.
T. 9 S., R. 6 E.,
Sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 4 E.,
Sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.
T. 11 S., R. 5 E.,
Sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NR $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 3 E.,
Sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.
T. 12 S., R. 10 E.,
Sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot 4.
T. 13 S., R. 9 E.,
Sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$.
The areas described aggregate 11,583.34 acres in Owyhee County.

(Alternative Site No. 2)—Proposal: Grasmere Drop Zone

T. 11 S., R. 4 E.,
Secs. 25 to 27 inclusive;
Secs. 34, N $\frac{1}{2}$, SE $\frac{1}{4}$ and E $\frac{1}{2}$ SW $\frac{1}{4}$;
Sec. 35.
T. 11 S., R. 5 E.,
Sec. 30, lots 1 to 4 inclusive;
Sec. 31, lots 1 to 4 inclusive.
T. 12 S., R. 4 E.,
Secs. 1 to 4 inclusive;
Sec. 9;
Sec. 10, NW $\frac{1}{4}$, S $\frac{1}{2}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ and SE $\frac{1}{4}$ NE $\frac{1}{4}$;

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Sec. 11, S $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ and NE $\frac{1}{4}$ NW $\frac{1}{4}$;

Sec. 12;

Sec. 13, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$;

Sec. 14, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$;

Sec. 15, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$.

(No Drop Zone)

T. 12 S., R. 9 E.,

Sec. 20, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 9 S., R. 6 E.,

Sec. 21.

T. 13 S., R. 4 E.,

Sec. 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$.

(Emitters)

T. 8 S., R. 9 E.,

Sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 9 S., R. 6 E.,

Sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 4 E.,

Sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 5 E.,

Sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 3 E.,

Sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 10 E.,

Sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot 4.

T. 13 S., R. 9 E.,

Sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

The areas described aggregate 9,673.34 acres in Owyhee County.

Six (6) public meetings are scheduled at the following dates, times, places, and addresses:

1. June 4, 1996, 8:00 to 9:00 p.m., Elk's Lodge, 327 S. 3rd West, Mtn. Home, Idaho
2. June 6, 1996, 8:00 to 9:00 p.m., Rim Rock High School, Bruneau, Idaho
3. June 10, 1996, 6:00 to 9:00 p.m., Boise State University, Jordan Ballroom, 1910 University Drive, Boise, Idaho
4. June 11, 1996, 6:00 to 9:00 p.m., Boise State University, Jordan Ballroom, 1910 University Drive, Boise, Idaho
5. June 13, 1996, 6:00 to 9:00 p.m., Three Creek School, Three Creek, Idaho
6. June 17, 1996, 6:00 to 9:00 p.m., College of Southern Idaho, Fine Arts Auditorium, 315 Falls Avenue, Twin Falls, Idaho

These meetings are the first step in soliciting public comments on the proposed withdrawal. Information gathered at these meetings will be used in the development of an environmental impact statement (EIS). Comments given at these meetings should focus on the merits of the proposal, the feasibility of the identified alternatives, the availability of other alternatives, issues which should be addressed in the EIS, any other comments the public wishes the Air Force and BLM to consider, and

any questions concerning the withdrawal proposal. Those who desire to submit written statements, should file them not later than June 3, 1996, to BLM/USAF, P.O. Box 329, Boise, Idaho 83701-0329.

Dated: April 24, 1996.

J. David Brunner,

Deputy State Director for Resource Services.

[FR Doc. 96-10652 Filed 4-29-96; 8:45 am]

BILLING CODE 4310-GG-M

Minerals Management Service

Outer Continental Shelf, Gulf of Mexico Region, Proposed Louisiana Barrier Shoreline Restoration Effort

AGENCIES: Minerals Management Service (MMS), Department of the Interior; National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce; State of Louisiana Department of Natural Resources.

ACTION: Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) to Support Phase 1 of the Louisiana Barrier Shoreline Feasibility Study (Barataria-Terrebonne Basin Barrier Island Restoration Effort).

PURPOSE OF THE NOI: The NOI announces the decision to prepare an EIS and initiate the scoping process. The scoping process affords Federal, State, local government agencies, and other interested parties the opportunity to identify significant issues and alternatives to be analyzed in the EIS.

DATES: Comments must be submitted on or before June 14, 1996.

PROPOSED ACTION: The purpose to which the Federal agencies are responding in the barrier island project and the proposed major Federal action to be considered are as follows:

Purpose: The restoration, protection, and enhancement of Louisiana coastal wetlands, and for other purposes.

Proposed Action: Restoration of the Louisiana Barrier Shoreline as Identified in Phase 1 of the Louisiana Barrier Shoreline Feasibility Study (Barataria and Terrebonne Basins).

SUMMARY AND BACKGROUND ON THE PROPOSED ACTION: Under the auspices of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), the feasibility and benefits of restoring the barrier islands of coastal Louisiana are currently being evaluated with respect to their role in wetlands protection and enhancement. A feasibility study is underway to assess and quantify wetland loss problems

linked to diminishing protection from barrier islands along the Louisiana coast, to identify solutions to these problems, and to determine the barrier configuration that will best protect Louisiana's coastal resources from environmental degradation. The feasibility study is being conducted in three phases: Phase 1, currently ongoing, encompasses the Barataria-Terrebonne Island chain; Phase 2 will focus on the Chenier Plain coast; Phase 3 will focus on the Chandeleur Islands.

Within the Phase 1 study area, the State of Louisiana is proposing to renourish Isles Dernieres and Timbalier Islands using Federal offshore sand deposits. In addition to renourishment, other coastal restoration methods, such as dune building, vegetation planting, hard structures, and related actions may be employed. On April 19, 1995, the Governor of the State of Louisiana contacted the MMS to request a noncompetitive lease to use Federal sand resources from Ship Shoal for restoration of the Louisiana barrier islands. The MMS has determined that the use of Federal sand from Outer Continental Shelf (OCS) areas such as Ship Shoal for barrier island restoration and subsequent wetlands protection meets the negotiated agreement requirements under Section 8(k)(2)(A)(i) of the OCS Lands Act (43 U.S.C. 1337(k)(2)(A)(i)).

The National Environmental Policy Act (NEPA) process is initiated when Federal agencies consider major actions which may significantly affect the environment. Because the environmental consequences of barrier island restoration are not fully understood and the extraction of Federal sand for the purposes of barrier island and wetlands restoration is considered a major Federal action, an EIS will be prepared.

This specific EIS will support the Phase 1 portion of the feasibility study. Impacts associated with Phases 2 and 3 will be evaluated in subsequent NEPA documents. The EIS will be used to assist the CWPPRA Task Force in making funding decisions regarding Phase 1 restoration methods as well as aid the MMS with respect to the request for a noncompetitive lease to the State of Louisiana for the use of Federal sand. The EIS will consider all reasonable restoration methods, the environmental consequences resulting from such methods, any alternatives to using material from the Ship Shoal area, and possible mitigation measures or stipulations which could be applied on the OCS or in the renourishment areas to ensure that a balance between orderly resource development and protection of

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

(ID-933-1430-01; IDI-31741)

Notice of Public Meetings for Proposed Land Withdrawal: Idaho

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Public Meetings.

SUMMARY: The Department of the Air Force proposes to withdraw 11,583.34 acres under Alternative Site No. 1 or 9,673.34 acres under Alternative Site No. 2 of public land from all forms of appropriation under the public land laws, mining laws and mineral leasing laws, for the Mountain Home Air Force Base Enhanced Training in Idaho (ETI) site. Several public meetings will be held to gather comments on the proposal, at the dates, times, places and addresses described in this Notice.

EFFECTIVE DATE: Date of publication.

FOR FURTHER INFORMATION CONTACT: Howard Hedrick, BLM Idaho State Office, 3380 Americana Terrace, Boise, Idaho 83706-2500, 208-384-3197.

The Department of the Air Force proposes that 11,583.34 acres under Alternative Site No. 1 or 9,673.34 acres under Alternative Site No. 2 of public land be withdrawn for a period of 20 years to provide protection of the ETI. The lands are described as follows:

Boise Meridian

(Alternative Site No. 1) - Proposal: Clover Butte Drop Zone

T. 12 S., R. 8 E.,

sec. 10, SE $\frac{1}{4}$ SE $\frac{1}{4}$;

sec. 11, S½S½;

sec. 12, S½S½;

sec. 13;

sec. 14;

sec. 15, E½E½;

sec. 22, E½E½;

secs. 23 to 26 inclusive;

sec. 27, E½E½;

sec. 34, E½E½;

sec. 35.

T. 12 S., R. 9 E.,

sec. 7, lot 4, SE¼SW¼ and S½SE¼;

sec. 8, S½S½;

secs. 17 to 20 inclusive;

secs. 29 to 32 inclusive.

(No Drop Zone)

T. 11 S., R. 4 E.,

sec. 23, S½SW¼NW¼SE¼.

T. 9 S., R. 6 E.,

sec. 21.

T. 13 S., R. 4 E.,

sec. 4, N½NE¼NW¼SW¼.

(Emitters)

T. 8 S., R. 9 E.,

sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 9 S., R. 6 E.,

sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 4 E.,

sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 5 E.,

sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 3 E.,

sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 10 E.,

sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot 4.

T. 13 S., R. 9 E.,

sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$.

The areas described aggregate 11,583.34 acres in Owyhee County.

(Alternative Site No. 2) - Proposal: Grasmere Drop Zone

T. 11 S., R. 4 E.,

secs. 25 to 27 inclusive;

secs. 34, N $\frac{1}{2}$, SE $\frac{1}{4}$ and E $\frac{1}{2}$ SW $\frac{1}{4}$;

sec. 35.

T. 11 S., R. 5 E.,

sec. 30, lots 1 to 4 inclusive;

sec. 31, lots 1 to 4 inclusive.

T. 12 S., R. 4 E.,

secs. 1 to 4 inclusive;

sec. 9;

sec. 10, NW $\frac{1}{4}$, S $\frac{1}{2}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ and SE $\frac{1}{4}$ NE $\frac{1}{4}$;

sec. 11, S $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ and NE $\frac{1}{4}$ NW $\frac{1}{4}$;

sec. 12;

sec. 13, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, and N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$;

sec. 14, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and
N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$;

sec. 15, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ and
N $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$.

(No Drop Zone)

T. 12 S., R. 9 E.,

sec. 20, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 9 S., R. 6 E.,

sec. 21.

T. 13 S., R. 4 E.,

sec. 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$.

(Emitters)

T. 8 S., R. 9 E.,

sec. 34, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 9 S., R. 6 E.,

sec. 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 4 E.,

sec. 23, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$.

T. 11 S., R. 5 E.,

sec. 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 3 E.,

sec. 26, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 12 S., R. 10 E.,

sec. 30, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ within lot 4.

T. 13 S., R. 9 E.,

sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.


The areas described aggregate 9,673.34 acres in Owyhee County.

Two (2) public meetings are scheduled at the following dates, times, places, and addresses:

1. June 27, 1996, 5:00 to 8:00 p.m., Lion's Den, Jordan Valley, Oregon
2. July 1, 1996, 5:00 to 8:00 p.m., Elko County Library, 720 Court Street, Elko,
Nevada

These meetings are the first step in soliciting public comments on the proposed withdrawal. Information gathered at these meetings will be used in the development of an environmental impact statement (EIS). Comments given at these meetings should focus on the merits of the proposal, the feasibility of the identified alternatives, the

availability of other alternatives, issues which should be addressed in the EIS, any other comments the public wishes the Air Force and BLM to consider, and any questions concerning the withdrawal proposal. Those who desire to submit written statements, should file them not later than August 1, 1996, to BLM/USAF, P.O. Box 329, Boise, Idaho 83701-0329.



David Brunner
Deputy State Director for Resource Services

Date: 5/23/96

of the Department of the Interior and effective November 20, 1996.

FOR FURTHER INFORMATION CONTACT:

Information related to this action, including the environmental assessment, is available for review at the Bureau of Land Management, Farmington District Office, 1235 LaPlata Highway, Farmington, NM 87401.

SUPPLEMENTARY INFORMATION:

Publication of this notice segregates the public land described above from all other forms of appropriation under the public land laws, including the general mining laws, except for leasing and conveyance under the Recreation and Public Purposes Act and leasing under the mineral leasing laws for a period of two (2) years from date of this publication in the Federal Register. The segregative affect will terminate upon issuance of the lease and patent to the Blanco Canyon Word of Faith, Inc., or two (2) years from the date of this publication, whichever occurs first.

The lease, when issued, will be subject to the following terms:

1. Provisions of the Recreation and Public Purposes Act and to all applicable regulations of the Secretary of the Interior.

2. Provisions of the Resource Conservation and Recovery Act of 1976 (RCRA) as amended, 42 U.S.C. 6901-1987 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended, 42 U.S.C. 9601 and all applicable regulations.

3. Provisions of Title VI of the Civil Rights Act of 1964.

4. Provisions that the lease be operated in compliance with the approved Development Plan.

The patent, when issued, will be subject to the following terms:

1. Reservation to the United States of a right-of-way for ditches and canals in accordance with 43 U.S.C. 945.

2. Reservation to the United States of coal.

3. All valid existing rights, e.g. rights-of-way and leases of record.

4. Provisions that if the patentee or its successor attempts to transfer title to or control over the land to another or the land is devoted to a use other than that for which the land was conveyed, without the consent of the Secretary of the Interior or his delegate, or prohibits or restricts, directly or indirectly, or permits it agents, employees, contractors, or subcontractors, including without limitation, lessees, sublessees and permittees, to prohibit or restrict, directly or indirectly, the use of any part of the patented lands or any of the facilities whereon by any person

because of such person's race, creed, color, or national origin, title shall revert to the United States.

The lands are not needed for Federal purposes. Leasing and later patenting is consistent with current Bureau of Land Management policies and land use planning. The estimated time of lease issuance is December 31, 1996, with the patent being issued upon substantial development taking place. The proposal serves the public interest since it would provide a church and recreation facilities that would meet the needs of the surrounding Navajo Indian population.

Dated: September 13, 1996.

Ilyse K. Auringer,

Acting Assistant District Manager for Lands and Renewable Resources.

[FR Doc. 96-24004 Filed 9-18-96; 8:45 am]

BILLING CODE 4310-FB-P

[D-930-1920-00-4373; IDI-31741]

Notice of Addition of Lands to Proposed Withdrawal; Idaho

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The Department of Air Force has filed a request to add 10,766.60 acres to their withdrawal application for the Enhanced Training in Idaho (ETI) site. The original Notice of Proposed Withdrawal was published in the Federal Register, 61 FR 68, April 8, 1996.

DATE: Comments and requests for a meeting should be received on or before December 18, 1996.

ADDRESSES: Comments and meeting requests should be sent to the Idaho State Director, BLM, 3380 Americana Terrace, Boise, Idaho 83706-2500.

FOR FURTHER INFORMATION CONTACT: Jon Foster, BLM Idaho State Office, 208-384-3195.

SUPPLEMENTARY INFORMATION: On August 22, 1996, the Department of Air Force filed a request to add certain lands to their existing withdrawal application. These lands are in addition to those published in the Federal Register, 61 FR 68, April 8, 1996. The following described public lands are withdrawn from settlement, sale, location, or entry under the general land laws, including the mining and mineral leasing laws, subject to valid existing rights:

Boise Idaho

T. 12 S., R. 9 E.,

Sec. 35, E $\frac{1}{2}$ SW $\frac{1}{4}$ and SE $\frac{1}{4}$.

T. 12 S., R. 10 E.,

Sec. 31, lots 3 and 4, E $\frac{1}{2}$ SW $\frac{1}{4}$ and SE $\frac{1}{4}$;

Sec. 32, S $\frac{1}{2}$.

T. 13 S., R. 9 E.,

Sec. 1;

Sec. 2, lot 1, SE $\frac{1}{4}$ NE $\frac{1}{4}$ and E $\frac{1}{2}$ SE $\frac{1}{4}$;

Sec. 11, E $\frac{1}{2}$ E $\frac{1}{2}$;

Sec. 12;

Sec. 13;

Sec. 14, E $\frac{1}{2}$ E $\frac{1}{2}$ E $\frac{1}{2}$;

Sec. 23, E $\frac{1}{2}$ E $\frac{1}{2}$ E $\frac{1}{2}$;

Sec. 24.

T. 13 S., R. 10 E.,

Sec. 4, lots 3 and 4, S $\frac{1}{2}$ NW $\frac{1}{4}$ and S $\frac{1}{2}$;

Secs. 5 to 9 inclusive;

Secs. 17 to 21 inclusive.

The areas described aggregate 10,766.60 acres in Owyhee County.

The additional lands are being added as an alternative to the Enhanced Training in Idaho (ETI) proposal based on the results of public scoping.

This withdrawal will be authorized under the Act of February 28, 1958, 43 U.S.C. 155-158, and requires legislative action by Congress.

For a period of 90 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the addition of lands to the proposed withdrawal may present their views in writing to the Idaho State Director at the address shown above.

If a public meeting is required a notice of time and place will be published in the Federal Register and newspapers in the general vicinity at least 30 days before the scheduled date of a meeting.

Nine public meetings were held in June and July 1996 for the purpose of scoping the environmental documentation to meet National Environmental Policy Act requirements for the proposed withdrawal. The draft environmental impact statement currently under preparation includes the addition of the 10,766.60 acres described in this notice.

This application will be processed in accordance with the regulations set forth in 43 CFR 2300.

For a period of 2 years from the date of publication of this notice in the Federal Register, the additional described lands will be segregated, as specified above unless the application is denied or canceled or the withdrawal is approved prior to that date. The temporary uses that will be permitted during this segregative period are rights-of-way, leases, permits, licenses or discretionary land use authorizations that do not significantly disturb the surface of the land or impair values of the resources, but will be coordinated with the Installation Commander, Mountain Home Air Force Base, Idaho.

The temporary segregation of the additional land in connection with the withdrawal application shall not affect

administrative jurisdiction over the land, and segregation shall not have the effect of authorizing any use of the land by the Department of the Air Force.

Dated: September 9, 1996.

J. David Brunner,
Deputy State Director for Resource Services.
[FR Doc. 96-24001 Filed 9-18-96; 8:45 am]
BILLING CODE 4310-GG-M

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337-TA-378]

Certain Asian-Style Kamaboko Fish Cakes; Notice of Issuance of Limited Exclusion Order and Cease and Desist Orders and Termination of Investigation

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has issued a limited exclusion order and cease and desist orders to domestic respondents New Japan Food Corporation and Rhee Brothers, Inc. in the above-captioned investigation and terminated the investigation.

FOR FURTHER INFORMATION CONTACT: Jay H. Reiziss, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone 202-205-3116.

SUPPLEMENTARY INFORMATION: Complainant Yamasa Enterprises filed a complaint with the Commission on August 15, 1995, and a supplementary complaint on September 6, 1995, alleging that certain respondents were importing, selling for importation, and selling in the United States after importation certain Asian-style kamaboko fish cakes bearing marks or logos that were infringing trademarks owned by Yamasa Enterprises. The complaint named six entities as respondents: Yamasa Kamaboko Co., Ltd. ("YKCL"), Alpha Oriental Foods, Inc. ("Alpha"), N.A. Sales, Inc., New Japan Food Corporation ("New Japan"), Rhee Brothers, Inc. ("Rhee Brothers"), and Rokko Trading Co., Inc. N.A. Sales, Inc. and Rokko Trading Co., Inc. were terminated from the investigation on the basis of a settlement agreement. Alpha was never served and is believed to be out of business.

The Commission voted to institute an investigation of Yamasa Enterprise's complaint on September 12, 1995. 60 FR 48722 (September 20, 1995). On December 6, 1995, the complaint was

amended to reflect the issuance to complainant by the U.S. Patent and Trademark Office on September 12, 1995, of a registered trademark for the word "Yamasa."

On May 21, 1996, the ALJ issued Order No. 15 comprising, inter alia, two initial determinations (IDs) in which he granted (1) complainant's motion for summary determination that its investments in the United States satisfy the domestic industry requirement of section 337, and (2) complainant's motion for summary determination on all issues (including domestic industry) necessary to establish a violation of section 337. Order No. 15 also granted complainant's motion that respondents Rhee Brothers and New Japan be found in default, and granted in part complainant's motion for evidentiary sanctions against respondent YKCL for its failure to provide discovery.

On June 21, 1996, the Commission determined not to review the IDs, thereby finding a violation of section 337, and issued a notice seeking submissions from the parties on the issues of remedy, the public interest, and bonding. Complainants and the IA filed briefs on the issues of remedy, the public interest, and bonding. None of the respondents filed any written submissions on these issues. No reply briefs were filed.

Having reviewed the record in this investigation, including the written submissions of the parties, the Commission made its determinations on the issues of remedy, the public interest, and bonding. The Commission determined that a limited exclusion order prohibiting the unlicensed importation for consumption of infringing Asian-style kamaboko fish cakes produced and/or imported by YKCL is an appropriate remedy. In addition, the Commission issued cease and desist orders to domestic respondents New Japan and Rhee Brothers requiring them to cease and desist from the following activities in the United States: importing, selling, marketing, advertising, distributing, soliciting agents or distributors for, offering for sale, or otherwise transferring (except for exportation) in the United States infringing imported Asian-style kamaboko fish cakes.

The Commission also determined that the public interest factors enumerated in 19 U.S.C. §§ 1337 (d) and (f) do not preclude the issuance of the limited exclusion order and the cease and desist orders, and that the bond during the Presidential review period shall be in the amount of one hundred (100) percent of the entered value of the imported fish cakes.

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337); and section 210.50 of the Commission's Rules of Practice and Procedure (19 CFR 210.50).

Copies of the Commission's remedial orders, the Commission opinion in support thereof, and all other nonconfidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone 202-205-2000. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-205-1810.

Issued: September 13, 1996.

By order of the Commission.

Donna R. Koehnke,
Secretary.

[FR Doc. 96-24032 Filed 9-18-96; 8:45 am]
BILLING CODE 7020-02-P

[Investigation No. 731-TA-746 (Final)]

Beryllium Metal and High-Beryllium Alloys From Kazakhstan

AGENCY: United States International Trade Commission.

ACTION: Scheduling of the final phase of an antidumping investigation.

SUMMARY: The Commission hereby gives notice of the scheduling of the final phase of antidumping investigation No. 731-TA-746 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of less-than-fair-value imports from Kazakhstan of beryllium metal and high-beryllium alloys.¹

¹ The imported products covered by this investigation consist of beryllium metal and high-beryllium alloys with a beryllium content equal to or greater than 30 percent by weight, whether in ingot, billet, powder, block, lump, chunk, blank, or other semifinished form. These are intermediate or semifinished products that require further machining, casting and/or fabricating into sheet, extrusions, forgings or other shapes in order to meet the specifications of the end user. Beryllium metal and alloys in which beryllium predominates by weight are provided for in subheadings 8112.11.30 and 8112.11.60 of the Harmonized Tariff Schedule of the United States (HTS). Other alloys containing beryllium are provided for elsewhere in the HTS—e.g., aluminum-beryllium alloys are provided for in

Continued

APPENDIX K
NOISE ANALYSIS

APPENDIX K. AIRCRAFT NOISE ANALYSIS

K.1 NOISE

Appendix K presents a detailed discussion of noise and its effects on people and the environment. An assessment of aircraft noise requires a general understanding of how sound is measured and how it affects people in the natural environment. The purpose of this appendix is to address public concerns regarding aircraft noise impacts.

Section K.1.1 is a general discussion on the properties of noise. Section K.1.2 summarizes the noise metrics discussed throughout this draft environmental impact statement (DEIS). Section K.1.3 provides federal land-use compatibility guidelines that are used in analyzing aircraft noise impacts. Section K.2 addresses public concerns on potential impacts such as hearing loss, nonauditory health effects, annoyance, speech interference, sleep interference, and noise effects on domestic animals and wildlife.

K.1.1 General

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with aircraft operations. Of course, aircraft are not the only sources of noise in an urban or suburban surrounding, where interstate and local roadway traffic, rail, industrial, and neighborhood sources also intrude on the everyday quality of life. Nevertheless, aircraft are readily identifiable to those affected by their noise and are typically singled out for special attention and criticism. Consequently, aircraft noise problems often dominate analyses of environmental impacts.

Sound is a physical phenomenon consisting of minute vibrations which travel through a medium, such as air, and are sensed by the human ear. Whether that sound is interpreted as pleasant (for example, music) or unpleasant (for example, aircraft noise) depends largely on the listener's current activity, past experience, and attitude toward the source of that sound. It is often true that one person's music is another person's noise.

The measurement and human perception of sound involves two basic physical characteristics: intensity and frequency. Intensity is a measure of the acoustic energy of the sound vibrations and is expressed in terms of sound pressure. The higher the sound pressure, the more energy carried by the sound and the louder the perception of that sound. The second important physical characteristic is sound frequency which is the number of times per second the air vibrates or oscillates. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are typified by sirens or screeches.

The loudest sounds which can be detected comfortably by the human ear have intensities which are 1,000,000,000,000 times larger than those of sounds which can just be detected. Because of this vast range, any attempt to represent the intensity of sound using a linear scale becomes very unwieldy. As a result, a logarithmic unit known as the decibel (abbreviated

dB) is used to represent the intensity of a sound. Such a representation is called a sound level.

A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example:

$$60 \text{ dB} + 60 \text{ dB} = 63 \text{ dB, and}$$

$$80 \text{ dB} + 80 \text{ dB} = 83 \text{ dB.}$$

The total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

$$60.0 \text{ dB} + 70.0 \text{ dB} = 70.4 \text{ dB.}$$

Because the addition of sound levels behaves differently than that of ordinary numbers, such addition is often referred to as "decibel addition" or "energy addition." The latter term arises from the fact that what we are really doing when we add decibel values is first converting each decibel value to its corresponding acoustic energy, then adding the energies using the normal rules of addition, and finally converting the total energy back to its decibel equivalent.

An important facet of decibel addition arises later when the concept of time-average sound levels is introduced to explain Day-Night Average Sound Level. Because of the logarithmic units, the time-average sound level is dominated by the louder levels which occur during the averaging period. As a simple example, consider a sound level which is 100 dB and lasts for 30 seconds, followed by a sound level of 50 dB which also lasts for 30 seconds. The time-average sound level over the total 60-second period is 97 dB, not 75 dB.

The minimum change in the time-average sound level of individual events which an average human ear can detect is about 3 dB. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud sounds and for quieter sounds. A decrease in sound level of 10 dB actually represents a 90 percent decrease in sound intensity but only a 50 percent decrease in perceived loudness because of the nonlinear response of the human ear (similar to most human senses).

Sound frequency is measured in terms of cycles per second (cps), or hertz (Hz), which is the preferred scientific unit for cps. The normal human ear can detect sounds which range in frequency from about 20 Hz to about 15,000 Hz. All sounds in this wide range of frequencies, however, are not heard equally well by the human ear, which is most sensitive to frequencies in the 1000 to 4000 Hz range. In measuring community noise, this frequency dependence is taken into account by adjusting the very high and very low frequencies to approximate the human ear's lower sensitivity to those frequencies. This is called "A-weighting" and is commonly used in measurements of community environmental noise.

Sound levels measured using A-weighting are most properly called A-weighted sound levels while sound levels measured without any frequency weighting are most properly called sound levels. However, since most environmental impact analysis documents deal only with A-weighted sound levels, the adjective "A-weighted" is often omitted, and A-weighted sound levels are referred to simply as sound levels. In some instances, the author will indicate that the levels have been A-weighted by using the abbreviation dBA or dB(A), rather than the abbreviation dB, for decibel. As long as the use of A-weighting is understood to be used, there is no difference implied by the terms "sound level" and "A-weighted sound level" or by the units dB, dBA, and dB(A). In this document, all levels are A-weighted and are reported in dB, unless otherwise indicated.

Sound levels do not represent instantaneous measurements but rather averages over short periods of time. Two measurement time periods are most common — one second and one-eighth of a second. A measured sound level averaged over one second is called a slow response sound level; one averaged over one-eighth of a second is called a fast response sound level. Most environmental noise studies use slow response measurements, and the adjective "slow response" is usually omitted. It is easy to understand why the proper descriptor "slow response A-weighted sound level" is usually shortened to "sound level" in environmental impact analysis documents.

K.1.2 Noise Metrics

A "metric" is defined as something "of, involving, or used in measurement." As used in environmental noise analyses, a metric refers to the unit or quantity which quantitatively measures the effect of noise on the environment. Noise studies have typically involved a confusing proliferation of noise metrics as individual researchers have attempted to understand and represent the effects of noise. As a result, past literature describing environmental noise or environmental noise abatement has included many different metrics. Recently, however, various federal agencies involved in environmental noise mitigation have agreed on common metrics for environmental impact analysis documents, and both the Department of Defense (DoD) and the Federal Aviation Administration (FAA) have specified those which should be used for federal aviation noise assessments. These metrics are as follows.

K.1.2.1 MAXIMUM SOUND LEVEL

The highest A-weighted sound level measured during a single event in which the sound level changes value as time goes on (e.g., an aircraft overflight) is called the maximum A-weighted sound level or maximum sound level, for short. It is usually abbreviated by ALM, Lmax, or LAmax . The maximum sound levels of typical events are shown in Figure K-1. The maximum sound level is important in judging the interference caused by a noise event with conversation, TV or radio listening, sleep, or other common activities.

K.1.2.2 SOUND EXPOSURE LEVEL

Individual time-varying noise events have two main characteristics — a sound level which changes throughout the event and a period of time during which the event is heard. Although the maximum sound level, described above, provides some measure of the intrusiveness of the event, it alone does not completely describe the total event. The period of time during which the sound is heard is also significant. The Sound Exposure Level (abbreviated SEL or LAE) combines both of these characteristics into a single metric.

Sound Exposure Level is a logarithmic measure of the total acoustic energy transmitted to the listener during the event. Mathematically, it represents the sound level of the constant sound that would, in one second, generate the same acoustic energy as did the actual time-varying noise event. Since aircraft overflights usually last longer than one second, the Sound Exposure Level of an overflight is usually greater than the maximum sound level of the overflight.

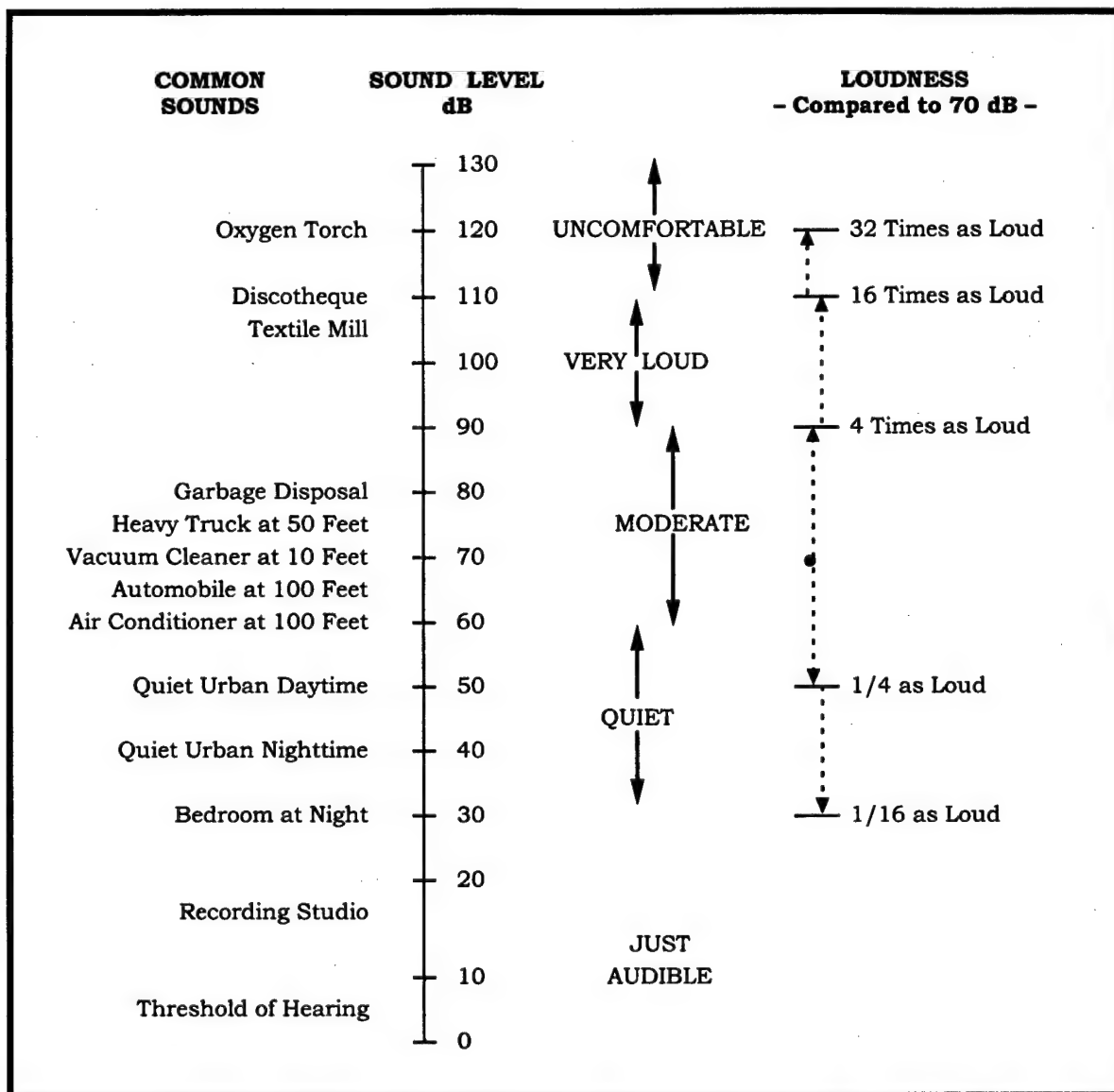
Sound exposure level is a composite metric which represents both the intensity of a sound and its duration. It does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event. It has been well established in the scientific community that Sound Exposure Level measures this impact much more reliably than just the maximum sound level.

Because the sound exposure level and the maximum sound level are both A-weighted sound levels expressed in decibels, there is sometimes confusion between the two, so the specific metric used should be clearly stated.

K.1.2.3 DAY-NIGHT AVERAGE SOUND LEVEL

Time-average sound levels are the measurements of sound levels which are averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period.

For the evaluation of community noise effects, and particularly aircraft noise effects, the Day-Night Average Sound Level (abbreviated DNL or Ldn) is used. Day-Night Average Sound Level averages aircraft sound levels at a location over a complete 24-hour period, with a 10-decibel adjustment added to those noise events which take place between 10:00 P.M. and



Source: *Handbook of Noise Control*, C.M. Harris, Editor, McGraw-Hill Book Co., 1979.

Figure K-1. Typical A-Weighted Sound Levels of Common Sounds.

7:00 A.M. (local time) the following morning. This 10-decibel "penalty" represents the added intrusiveness of sounds which occur during normal sleeping hours, both because of the increased sensitivity to noise during those hours and because ambient sound levels during nighttime are typically about 10 dB lower than during daytime hours.

Ignoring the 10-decibel nighttime adjustment for the moment, Day-Night Average Sound Level may be thought of as the continuous A-weighted Sound Level which would be present if all of the variations in sound level which occur over a 24-hour period were smoothed out so as to contain the same total sound energy.

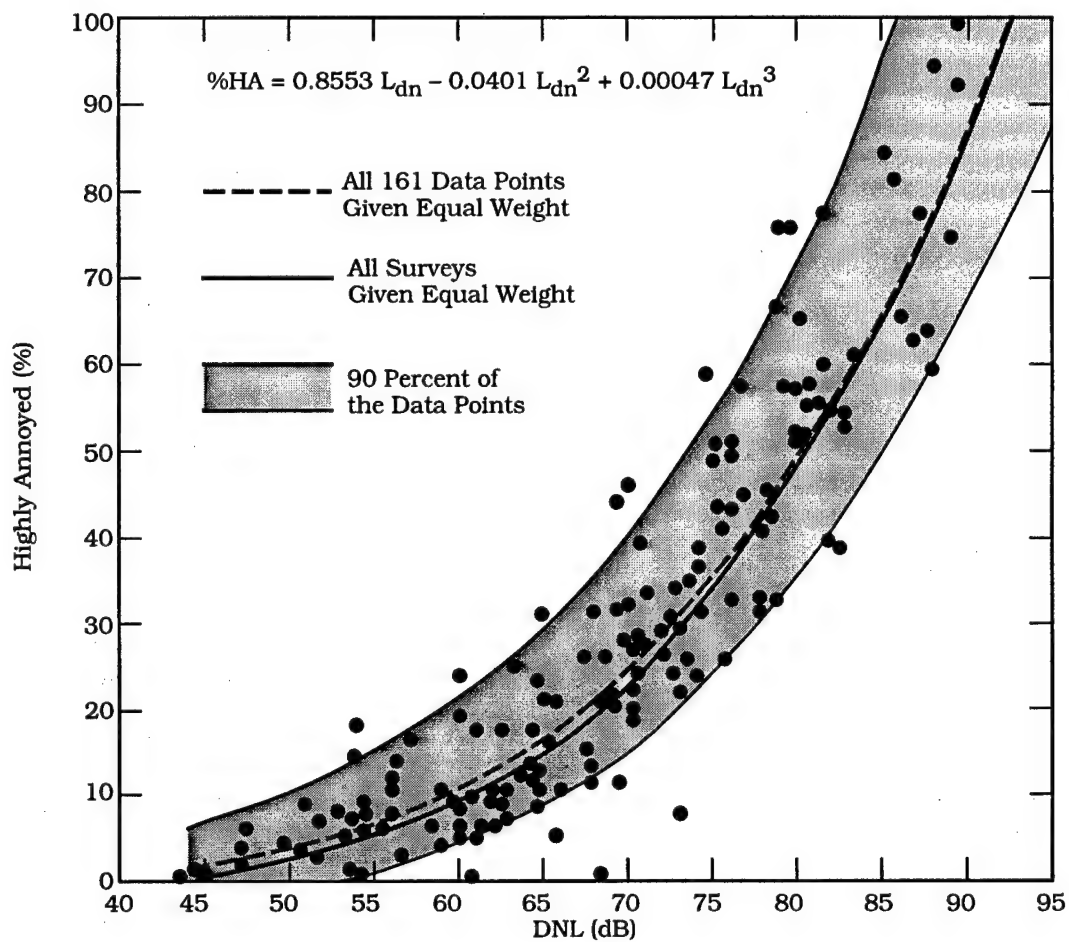
Day-Night Average Sound Level provides a single measure of overall noise impact, but does not provide specific information on the number of noise events or the individual sound levels which occur during the day. For example, a Day-Night Average Sound Level of 65 dB could result from a very few noisy events, or a large number of quieter events.

As noted earlier for Sound Exposure Level, Day-Night Average Sound Level does not represent the sound level heard at any particular time, but rather represents the total sound exposure. Scientific studies and social surveys which have been conducted to appraise community annoyance to all types of environmental noise have found the Day-Night Average Sound Level to be the best measure of that annoyance. Its use is endorsed by the scientific community (ANSI 1980; ANSI 1988; USEPA 1972a; FICUN 1980; FICON 1992).

There is, in fact, a remarkable consistency in the results of attitudinal surveys about aircraft noise conducted in different countries to find the percentages of groups of people who express various degrees of annoyance when exposed to different levels of Day-Night Average Sound Level. This is illustrated in Figure K-2, which summarizes the results of a large number of social surveys relating community responses to various types of noises, measured in Day-Night Average Sound Level.

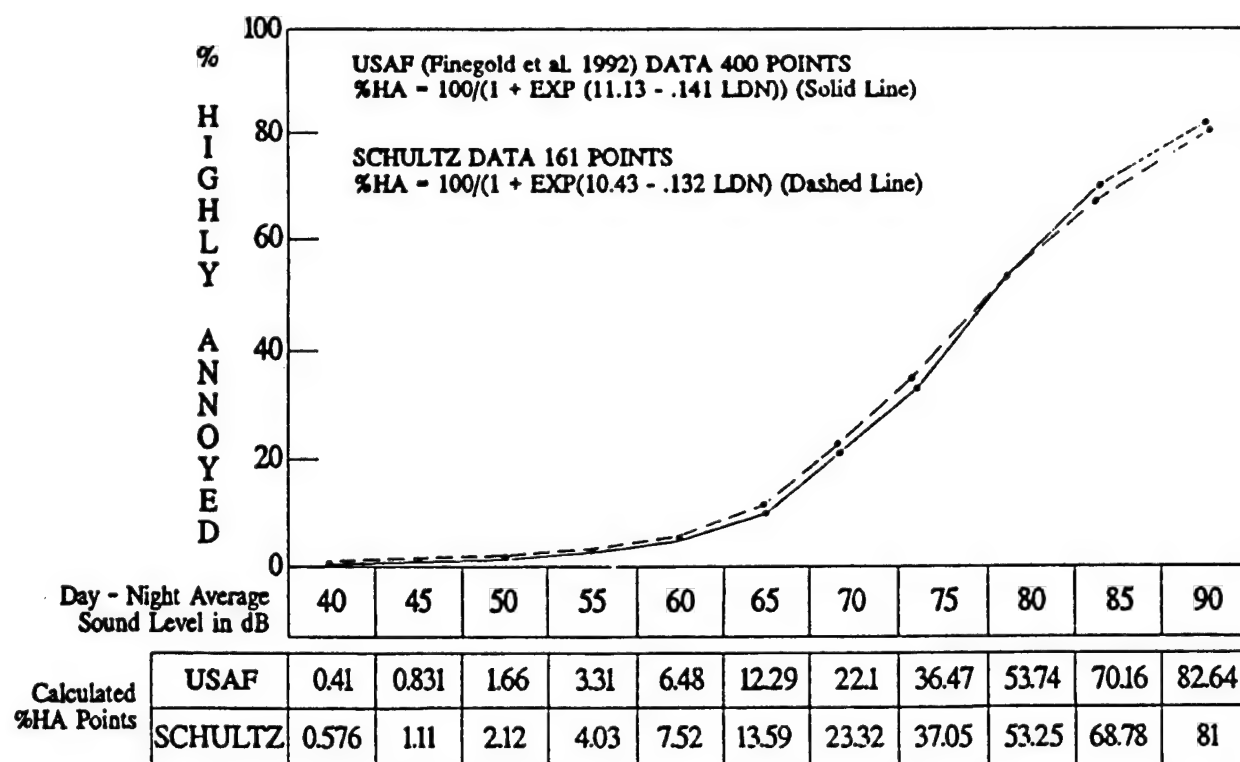
Figure K-2 was taken from a 1978 publication (Schultz 1978), and shows the original curve fit. A more recent study has reaffirmed this relationship (Fidell et al. 1991). Figure K-3 (FICON 1992) shows an updated form of the curve fit (Finegold et al. 1994) in comparison with the original. The updated fit, which does not differ substantially from the original, is the current preferred form. In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors which influence the manner in which individuals react to noise. Nevertheless, findings substantiate that community annoyance to aircraft noise is represented quite reliably using Day-Night Average Sound Level.

This relation between community annoyance and time-average sound level has been confirmed, even for infrequent aircraft noise events. A NASA study (Fields and Powell 1985) reported the reactions of individuals in a community to daily helicopter overflights, ranging from one to 32 per day. The stated reactions to infrequent helicopter overflights correlated



Source: Schultz, 1978.

Figure K-2. Community Surveys of Noise Annoyance.



**Figure K-3. Response of Communities to Noise;
Comparison of Original (Schultz 1978) and
Current (Finegold et al. 1994) Curve Fits.**

quite well with the daily time-average sound levels over this range of numbers of daily noise events.

The use of Day-Night Average Sound Level has been criticized recently as not accurately representing community annoyance and land-use compatibility with aircraft noise. Much of that criticism stems from a lack of understanding of the basis for the measurement or calculation of Ldn. One frequent criticism is based on the inherent feeling that people react more to single noise events and not as much to "meaningless" time-average sound levels.

In fact, a time-average noise metric, such as Ldn, takes into account both the noise levels of all individual events which occur during a 24-hour period and the number of times those events occur. As described briefly above, the logarithmic nature of the decibel unit causes the noise levels of the loudest events to control the 24-hour average.

As a simple example of this characteristic, consider a case in which only one aircraft overflight occurs in daytime during a 24-hour period, creating a sound level of 100 dB for 30 seconds. During the remaining 23 hours, 59 minutes, and 30 seconds of the day, the ambient sound level is 50 dB. The Day-Night Average Sound Level for this 24-hour period is 65.5 dB. Assume, as a second example, that ten such 30-second overflights occur in daytime hours during the next 24-hour period, with the same ambient sound level of 50 dB during the remaining 23 hours and 55 minutes of the day. The Day-Night Average Sound Level for this 24-hour period is 75.4 dB. Clearly, the averaging of noise over a 24-hour period does not ignore the louder single events and tends to emphasize both the sound levels and number of those events. This is the basic concept of a time-average sound metric, and specifically the Day-Night Average Sound Level.

K.1.2.4 ONSET-RATE ADJUSTED DAY-NIGHT AVERAGE SOUND LEVEL

Aircraft operations along low-altitude Military Training Routes (MTRs) generate a noise environment somewhat different from other community noise environments. Overflights are highly sporadic, ranging from five or ten per day to less than five per week. This situation differs from most community noise environments, in which noise tends to be continuous or patterned. Individual military overflight events also differ from typical community noise events, because of the low-altitude and high-air-speed characteristics of military aircraft operating on MTRs.

To represent these differences, the conventional Day-Night Average Sound Level metric is adjusted to account for the "surprise" effect of the sudden onset of aircraft noise events on humans (Plotkin et al. 1991; Stusnick et al. 1992; Stusnick et al. 1993). For aircraft exhibiting a rate of increase in sound level (called onset rate) of from 15 to 30 dB per second, an adjustment or penalty ranging from 0 to 5 dB is added to the normal Sound Exposure Level. Onset rates above 30 dB per second require a 5 dB penalty, while onset rates below 15 dB per second require no adjustment. The Day-Night Average Sound Level is then determined in the same manner as for conventional aircraft noise events and is designated as Onset-Rate Adjusted Day Night Average Sound Level (abbreviated Ldnr). Because of the sporadic

occurrences of aircraft overflights along MTRs, the number of average daily operations is determined by using the calendar month with the highest number of operations along the MTR. The monthly average is denoted *Ldn_{mr}*.

K.1.3 Land-Use Compatibility

As noted above, the inherent variability between individuals makes it impossible to predict accurately how any individual will react to a given noise event. Nevertheless, when a community is considered as a whole, its overall reaction to noise can be represented with a high degree of confidence. As described above, the best noise exposure metric for this correlation is the Day-Night Average Sound Level or Onset-Rate Adjusted Day-Night Average Sound Level for military overflights.

In June 1980, an ad hoc Federal Interagency Committee on Urban Noise published guidelines (FICUN 1980) relating Day-Night Average Sound Levels to compatible land uses. This committee was composed of representatives from the United States Departments of Defense, Transportation, and Housing and Urban Development; the Environmental Protection Agency; and the Veterans Administration. Since the issuance of these guidelines, federal agencies have generally adopted these guidelines for their noise analyses.

Following the lead of the committee, the DoD and the FAA adopted the concept of land-use compatibility as the accepted measure of aircraft noise effect. The FAA included the committee's guidelines in the Federal Aviation Regulations (Harris 1984). These guidelines are reprinted in Table K-1, along with the explanatory notes included in the regulation. Although these guidelines are not mandatory (note the footnote "*" in the table), they provide the best means for determining noise impact in airport communities. In general, residential land uses normally are not compatible with outdoor Day-Night Average Sound Levels (*Ldn* values) above 65 dB, and the extent of land areas and populations exposed to *Ldn* of 65 dB and higher provides the best means for assessing the noise impacts of alternative aircraft actions.

In 1990, a new Federal Interagency Committee on Noise was formed to review the manner in which aviation noise effects are assessed and presented. This group released its report in 1992 and reaffirmed the use of Day-Night Average Sound Level as the best metric for this purpose (FICON 1992).

Analyses of aircraft noise impacts and compatible land uses around DoD facilities and airspaces are normally made using NOISEMAP (Moulton 1992) and/or MR_NMAP (Lucas and Calamia 1996). These computer-based simulation programs calculate Day-Night Average Sound Levels at many points on the ground around an airfield or military operating area and draw contours of equal level for overlay onto land-use maps of the same scale. Each program mathematically calculates the Sound Exposure Levels of all aircraft operations for a 24-hour period, taking into consideration the number and types of aircraft, their flight paths and engine thrust settings, the time of day (daytime or nighttime)

Table K-1. Land Use Compatibility with Yearly Day-Night Average Sound Levels

Land Use	Yearly Day-Night Average Sound Level (L _{dn}) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
Residential						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoria, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware, and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

Numbers in parentheses refer to notes.

* The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

KEY TO TABLE A-1

SLUCM = Standard Land-Use Coding Manual.

Y (Yes) = Land Use and related structures compatible without restrictions.

N (No) = Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 = Land Use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structures.

NOTES FOR TABLE A-1

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal level is low.

(5) Land-use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

that each operation occurs, and the onset rate, as appropriate. NOISEMAP and ROUTEMAP utilize the same physical models and aircraft performance data and are collectively referred to as "NOISEMAP technology" or simply "NOISEMAP."

Day-Night Average Sound Levels may also be measured directly around an airfield, rather than calculated with NOISEMAP; however, the direct measurement of annualized Day-Night Average Sound Level is difficult and costly since it requires year-round monitoring or careful seasonal sampling.

NOISEMAP provides an accurate projection of aircraft noise around airfields. NOISEMAP also has the flexibility of calculating sound levels at any specified ground location so that noise levels at representative points under flight paths can be ascertained. NOISEMAP is most accurate for comparing "before and after" noise impacts which would result from proposed airfield changes or alternative noise control actions, so long as the various impacts are calculated in a consistent manner.

K.2 NOISE EFFECTS

K.2.1 Hearing Loss

Noise-induced hearing loss is probably the best defined of the potential effects of human exposure to excessive noise. Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency, 4,000 Hz, after a 40-year exposure) suggests a time-average sound level of 70 dB over a 24-hour period (USEPA 1972a). Since it is unlikely that airport neighbors will remain outside their homes 24 hours per day for extended periods of time, there is little possibility of hearing loss below a Day-Night Average Sound Level of 75 dB, and this level is extremely conservative.

K.2.2 Nonauditory Health Effects

Nonauditory health effects of long-term noise exposure, where noise may act as a risk factor, have never been found to occur at levels below those protective against noise-induced hearing loss, described above. Most studies attempting to clarify such health effects have found that noise exposure levels established for hearing protection will also protect against any potential nonauditory health effects, at least in workplace conditions. The best scientific summary of these findings is contained in the lead paper at the National Institutes of Health Conference on Noise and Hearing Loss, held on 22-24 January 1990 in Washington, D.C., which states the following:

The nonauditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven

to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an eight-hour day). At the recent (1988) International Congress on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss, and even above these criteria, results regarding such health effects were ambiguous. Consequently, one comes to the conclusion that establishing and enforcing exposure levels protecting against noise-induced hearing loss would not only solve the noise-induced hearing loss problem but also any potential nonauditory health effects in the work place. [von Gierke 1990; parenthetical wording added for clarification.]

Although these findings were directed specifically at noise effects in the work place, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the nonauditory health effects of aircraft noise are ambiguous, at best, and often contradictory. Yet, even those studies which purport to find such health effects use time-average noise levels of 75 dB and higher for their research.

For example, in an often-quoted paper, two UCLA researchers apparently found a relation between aircraft noise levels under the approach path to Los Angeles International Airport (LAX) and increased mortality rates among the exposed residents by using an average noise exposure level greater than 75 dB for the "noise-exposed" population (Meecham and Shaw 1979). Nevertheless, three other UCLA professors analyzed those same data and found no relation between noise exposure and mortality rates (Frerichs et al. 1980).

As a second example, two other UCLA researchers used this same population near Los Angeles International Airport to show a higher rate of birth defects during the period of 1970 to 1972 when compared with a control group residing away from the airport (Jones and Tauscher 1978). Based on this report, a separate group at the U.S. Centers for Disease Control performed a more thorough study of populations near Atlanta's Hartsfield International Airport for 1970 to 1972 and found no relation in their study of 17 identified categories of birth defects to aircraft noise levels above 65 dB (Edmonds 1979).

A recent review of health effects, prepared by a Committee of the Health Council of The Netherlands (CHCN 1996) reviewed currently available published information on this topic. They concluded that the threshold for possible long-term health effects was a 16-hour (0600 to 2200) Leq of 70 dB. Projecting this to 24 hours and applying the 10 dB nighttime penalty used with Ldn, this corresponds to Ldn of about 75 dB. The study also affirmed the risk threshold for hearing loss, as discussed earlier.

In summary, there is no scientific basis for a claim that potential health effects exist for aircraft time-average sound levels below 75 dB.

K.2.3 Annoyance

The primary effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the U.S. Environmental Protection Agency (USEPA) as any negative subjective reaction on the part of an individual or group (USEPA 1972a). As noted in the discussion of Day-Night Average Sound Level above, community annoyance is best measured by that metric.

Because the USEPA Levels Document (USEPA 1972a) identified Ldn of 55 dB as "...requisite to protect public health and welfare with an adequate margin of safety," it is commonly assumed that 55 dB should be adopted as a criterion for community noise analysis. From a noise exposure perspective, that would be an ideal selection. However, financial and technical resources are generally not available to achieve that goal. Most agencies have identified Ldn of 65 dB as a criterion which protects those most impacted by noise, and which can often be achieved on a practical basis (FICON 1992). This corresponds to about 13 percent of the exposed population being highly annoyed.

Although Ldn of 65 dB is widely used as a benchmark for significant noise impact, and is often an acceptable compromise, it is not a statutory limit and it is appropriate to consider other thresholds in particular cases. In this environmental impact statement (EIS), no specific threshold is used. The noise in each affected area is evaluated on the basis of the information presented in this appendix and in the body of the EIS. Particular attention is given to the ideal 55 dB identified by EPA.

K.2.4 Speech Interference

Speech interference associated with aircraft noise is a primary cause of annoyance to individuals on the ground. The disruption of routine activities such as radio or television listening, telephone use, or family conversation gives rise to frustration and irritation. The quality of speech communication is also important in classrooms, offices, and industrial settings and can cause fatigue and vocal strain in those who attempt to communicate over the noise. Research has shown that the use of the Sound Exposure Level metric will measure speech interference successfully, and that a Sound Exposure Level exceeding 65 dB will begin to interfere with speech communication.

K.2.5 Sleep Interference

Sleep interference is another source of annoyance associated with aircraft noise. This is especially true because of the intermittent nature and content of aircraft noise, which is more disturbing than continuous noise of equal energy and neutral meaning.

Sleep interference may be measured in either of two ways. "Arousal" represents actual awakening from sleep, while a change in "sleep stage" represents a shift from one of four sleep stages to another stage of lighter sleep without actual awakening. In general, arousal requires a somewhat higher noise level than does a change in sleep stage.

A recent analysis sponsored by the U.S. Air Force summarized 21 published studies concerning the effects of noise on sleep (Pearsons et al. 1989). The analysis concluded that a lack of reliable studies in homes, combined with large differences among the results from the various laboratory studies and the limited in-home studies, did not permit development of an acceptably accurate assessment procedure. The noise events used in the laboratory studies and in contrived in-home studies were presented at much higher rates of occurrence than would normally be experienced in the home. None of the laboratory studies were of sufficiently long duration to determine any effects of habituation, such as that which would occur under normal community conditions.

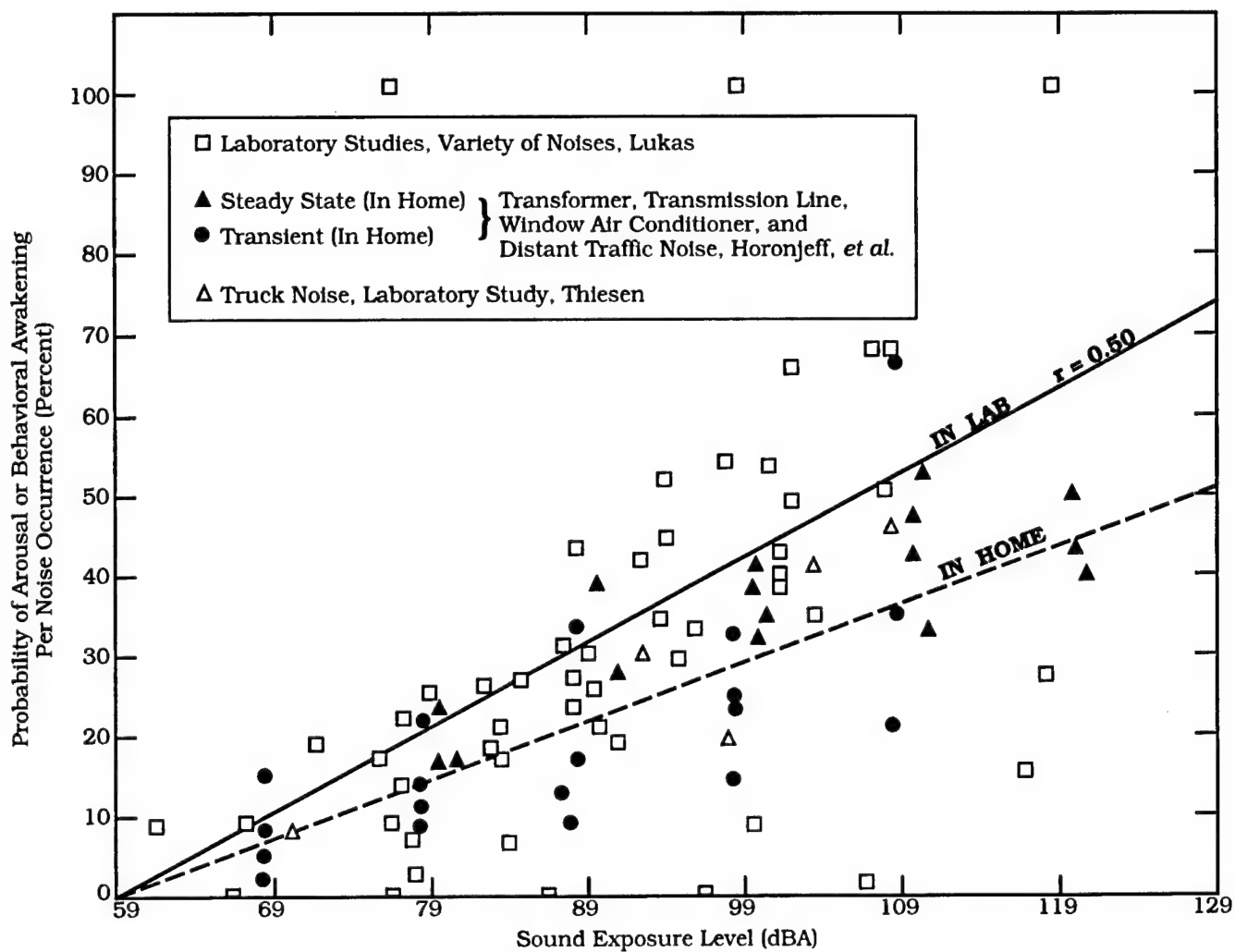
Nevertheless, some guidance is available in judging sleep interference. The USEPA identified an indoor Day-Night Average Sound Level of 45 dB as necessary to protect against sleep interference (USEPA 1972a). Assuming a very conservative structural noise insulation of 20 dB for typical dwelling units, this corresponds to an outdoor Day-Night Average Sound Level of 65 dB as minimizing sleep interference.

A 1984 publication reviewed the probability of arousal or behavioral awakening in terms of Sound Exposure Level (Kryter 1984). Figure K-4, extracted from Figure 10.37 of Kryter 1984, indicates that an indoor Sound Exposure Level of 65 dB or lower should awaken less than 5 percent of those exposed. These results do not include any habituation over time by sleeping subjects. Nevertheless, this provides a reasonable guideline for assessing sleep interference and corresponds to similar guidance for speech interference, as noted above.

K.2.6 Noise Effects on Domestic Animals and Wildlife

Animal species differ greatly in their responses to noise. Each species has adapted, physically and behaviorally, to fill its ecological role in nature, and its hearing ability usually reflects that role. Animals rely on their hearing to avoid predators, obtain food, and communicate with and attract other members of their species. Aircraft noise may mask or interfere with these functions. Secondary effects may include nonauditory effects similar to those exhibited by humans — stress, hypertension, and other nervous disorders. Tertiary effects may include interference with mating and resultant population declines.

There are available many scientific studies regarding the effects of noise on wildlife and some anecdotal reports of wildlife "flight" due to noise. Few of these studies or reports include any reliable measures of the actual noise levels involved. However, in the absence of definitive data on the effect of noise on animals, the Committee on Hearing, Bioacoustics, and Biomechanics of the National Research Council has proposed that protective noise criteria for animals be taken to be the same as for humans (NRC NAS 1977).



Source: Kryter, 1984.

Figure K-4. Probability of Arousal or Behavioral Awakening in Terms of Sound Exposure Level.

K.2.7 Noise Effects on Structures

Normally, the most sensitive components of a structure to airborne noise are the windows and, infrequently, the plastered walls and ceilings. An evaluation of the peak sound pressures impinging on the structure is normally sufficient to determine the possibility of damage. In general, at sound levels above 130 dB, there is the possibility of the excitation of structural component resonances. While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies, conservatively, only sounds lasting more than one second above a sound level of 130 dB are potentially damaging to structural components (NRC NAS 1977).

A recent study, directed specifically at low-altitude, high-speed aircraft on MTRs, showed that there is little probability of structural damage from such operations (Sutherland 1989). One finding in that study is that sound levels at damaging frequencies (e.g., 30 Hz for window breakage or 15 to 25 Hz for whole-house response) are rarely above 130 dB.

Noise-induced structural vibration may also cause annoyance to dwelling occupants because of induced secondary vibrations, or "rattle," of objects within the dwelling — hanging pictures, dishes, plaques, and bric-a-brac. Window panes may also vibrate noticeably when exposed to high levels of airborne noise, causing homeowners to fear of breakage. In general, such noise-induced vibrations occur at sound levels above those considered normally incompatible with residential land use. Thus, assessments of noise exposure levels for compatible land use should also be protective of noise-induced secondary vibrations.

K.2.8 Noise Effects on Terrain

Members of the public often perceive that noise from low-flying aircraft can cause avalanches or landslides by disturbing fragile soil or snow structures, especially in mountainous areas, causing landslides or avalanches. There are no known instances of such effects, and it is considered improbable that such effects will result from routine, subsonic aircraft operations.

K.2.9 Noise Effects on Historical and Archaeological Sites

Because of the potential for increased fragility of structural components of historical buildings and other historical sites, aircraft noise may affect such sites more severely than newer, modern structures. Again, there are few scientific studies of such effects to provide guidance for their assessment.

One study involved the measurements of sound levels and structural vibration levels in a superbly restored plantation house, originally built in 1795, and now situated approximately 1,500 feet from the centerline at the departure end of Runway 19L at Washington Dulles International Airport (IAD). These measurements were made in connection with the proposed scheduled operation of the supersonic Concorde airplane at Dulles (Wesler 1977). There was special concern for the building's windows, since roughly half of the 324 panes were original. No instances of structural damage were found. Interestingly, despite the high

levels of noise during Concorde takeoffs, the induced structural vibration levels were actually less than those induced by touring groups and vacuum cleaning within the building itself.

As noted above for the noise effects of noise-induced vibrations of normal structures, assessments of noise exposure levels for normally compatible land uses should also be protective of historic and archaeological sites.

K.3 REFERENCES

- "Community Reactions to Helicopter Noise: Results From an Experimental Study," *J. Acoust. Soc. Am.*, 82, 479-492, August 1987.
- Edmonds, L.D., *et al.*, "Airport Noise and Teratogenesis," *Archives of Environmental Health*, 243-247, July/August 1979.
- "Federal Agency Review of Selected Airport Noise Analysis Issues," Federal Interagency Committee on Noise, August 1992.
- Fidell, S., Barger, D.S., and Schultz, T.J., "Updating a Dosage-Effect Relationship for the Prevalence of Annoyance Due to General Transportation Noise," *J. Acoust. Soc. Am.*, 89, 221-233, January 1991.
- Frericks, R.R., *et al.*, "Los Angeles Airport Noise and Mortality: Faulty Analysis and Public Policy," *Am. J. Public Health*, 357-362, April 1980.
- "Guidelines for Considering Noise in Land-Use Planning and Control," Federal Interagency Committee on Urban Noise, June 1980.
- "Guidelines for Preparing Environmental Impact Statements on Noise," Committee on Hearing, Bioacoustics, and Biomechanics, The National Research Council, National Academy of Sciences, 1977.
- "Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare With an Adequate Margin of Safety," U.S. Environmental Protection Agency Report 550/9-74-004, March 1972.
- Jones, F.N., and Tauscher, J., "Residence Under an Airport Landing Pattern as a Factor in Teratism," *Archives of Environmental Health*, 10-12, January/February 1978.
- Kryter, K.D., "Physiological, Psychological, and Social Effects of Noise," NASA Reference Publication 1115, 446, July 1984.
- Meacham, W.C., and Shaw, N., "Effects of Jet Noise on Mortality Rates," *British J. Audiology*, 77-80, August 1979.
- Pearsons, K.S., Barber, D.S., and Tabachick, B.G., "Analyses of the Predictability of Noise-Induced Sleep Disturbance," USAF Report HSD-TR-89-029, October 1989.
- Plotkin, K.J., Sutherland, L.C., and Molino, J.A., "Environmental Noise Assessment for Military Aircraft Training Routes, Volume II: Recommended Noise Metric," Wyle Research Report WR 86-21, January 1987.

"Quantities and Procedures for Description and Measurement of Environmental Sound, Part 1," American National Standards Institute Standard ANSI S12.9-1988.

Schultz, T.J., "Synthesis of Social Surveys on Noise Annoyance," *J. Acoust. Soc. Am.*, 64, 377-405, August 1978.

"Sound Level Descriptors for Determination of Compatible Land Use," American National Standards Institute Standard ANSI S3.23-1980.

von Gierke, H.R., "The Noise-Induced Hearing Loss Problem", NIH Consensus Development Conference on Noise and Hearing Loss, Washington, D.C., 22-24 January 1990.

Wesler, J.E., "Concorde Operations At Dulles International Airport," NOISEXPO '77, Chicago, IL, March 1977.

APPENDIX L
BIOLOGICAL RESOURCES SUPPORT DATA

Appendix L. Vegetation descriptions within ROI One

Vegetation type	General description
Shrublands	
Wyoming big sagebrush/Sandberg's bluegrass <i>(Artemisia tridentata var. wyomingensis/ Poa secunda)</i>	<p>Wyoming big sagebrush/Sandberg's bluegrass community is found in areas of slightly deeper soil on the rolling hills and flat lands of the semi-arid desert. The dominate understory found within the Wyoming big sagebrush is Sandberg's bluegrass. The understory is also sparsely vegetated by bottlebrush squirreltail (<i>Sitation hystrix</i>), Hood's phlox, (<i>Phlox hoodii</i>) buckwheat (<i>Eriogonum ssp.</i>), desert paintbrush (<i>Castilleja chromosa.</i>), tailcup lupine (<i>Lupinus caudatus.</i>), Indian ricegrass (<i>Oryzopsis hymenoides</i>), threadstalk milkvetch (<i>Astragalus filipes</i>), Beckwith's milkvetch (<i>A. beckwithii</i>), aster (<i>Aster ssp.</i>) fleabane (<i>Erigeron ssp.</i>), and wild onion (<i>Allium nevadensis</i>).</p>
Wyoming big sagebrush/bluebunch wheatgrass <i>(Artemisia tridentata var. wyomingensis/ Agropyron spicatum)</i>	<p>Wyoming big sagebrush/bluebunch wheatgrass community is found in areas of slightly deeper soil on the rolling hills and flat lands in the semi-arid desert. The dominate understory found within this Wyoming big sagebrush community is bluebunch wheatgrass (<i>Agropyron spicatum</i>). The understory is also sparsely vegetated by Sandberg's bluegrass, bottlebrush squirreltail, Hood's phlox, long-leaf phlox (<i>P. longifolia</i>), buckwheat, tailcup lupine, threadstalk milkvetch, Beckwith's milkvetch, aster, fleabane, and wild onion.</p> <p>These areas may also be found codominating with bluebunch wheatgrass in some of the canyon slopes. These steep canyon slopes also included large areas of cliffs and talus slides, which are unvegetated. Other species found within this community are Hooker's balsamroot (<i>Balsamorhiza hookerii</i>), desert paintbrush, aster, wild onions, long-leaf phlox, nettle-leaf horsemint (<i>Agastache urticifolia</i>), and Sandberg's bluegrass.</p>
Wyoming big sagebrush/Sandberg's bluegrass-Low sagebrush/Idaho fescue <i>(Artemisia tridentata var. wyomingensis/ Poa secunda-Artemisia arbuscula/Festuca idahoensis)</i>	<p>The Wyoming big sagebrush/Sandberg's bluegrass community and the low sagebrush/Idaho fescue community meet and codominate some areas within the canyons slopes. These areas are a mix of steep slopes, talus slides and rocky outcrops. The Wyoming big sagebrush grows on the areas with the deeper soils, while the low sagebrush inhabits the shallower ledges and rocky areas. This community is a mix of Wyoming big sagebrush and low sagebrush with an understory of Idaho fescue, Sandberg's bluegrass, and bluebunch wheatgrass. The forbs found within this community are long-leaf phlox, Hood's phlox, desert paintbrush, aster, wild onions, low hawkweed (<i>Crepis modocensis.</i>), Hooker's balsamroot, and Pursh's milkvetch (<i>Astragalus purshii</i>).</p>

Wyoming big sagebrush/golden currant/bluebunch wheatgrass
(*Artemisia tridentata* var. *wyomingensis*/*Ribes aureum*/*Agropyron spicatum*)

Wyoming big sagebrush also becomes codominate with golden currant (*Ribes aureum*) in some of the canyon slopes and canyon bottoms of ROI One. These areas have a large grass component, made up of bluebunch wheatgrass and Sandberg's bluegrass. Other species found within this community are Hooker's balsamroot, Desert paintbrush, wild onion, Great Basin wildrye (*Elymus cinereus*), sweet bedstraw (*Galium triflorum*), nettle-leaf horsemint and low hawkweed.

Low sagebrush/Idaho fescue
(*Artemisia arbuscula*/*Festuca idahoensis*)

Low sagebrush/Idaho fescue community are generally located on the windswept ridgetops, and other areas with shallow, rocky soils. These areas are very rocky, and large patches may be composed of volcanic rock, and gravelly barrens. Growing as the dominate understory of grasses are Idaho fescue (*Festuca idahoensis*), and Sandberg's bluegrass. Other shrubs that may be found growing with the low sagebrush are rabbitbrush (*Chrysothamnus* ssp.) and occasionally in rocky areas, gutereizia (*Gutereizia sarothrae*). The low sagebrush/Idaho fescue community also have many forbs, such as long-leaf phlox, desert paintbrush, larkspur (*Delphinium bicolor.*), wild onions , rayless daisies (*Erigeron aphinactes*), low hawkweed, Hooker's balsamroot, chaenactus (*Chaenactus cusikii*) rock rose, (*Lewisia rediviva*) and Pursh's milkvetch. These forbs bloom spring and early summer, then quickly fade.

Rabbitbrush/Intermediate wheatgrass
(*Chrysothamnus* ssp./*Agropyron intermedium*)

The rabbitbrush/intermediate wheatgrass community main shrub components are green and common rabbitbrush. This vegetation type may generally be found in areas that have been burned in the past. Within these areas, intermediate wheatgrass (*Agropyron intermedium*), has also been planted, and it provides the dominant understory. Other native grasses such as bluebunch wheatgrass, Sandberg's wheatgrass and bottlebrush squirreltail grass may also be found in significant amounts. Other forbs within this community type are tragopogon (*Tragopogon dubious*) clasping leaf peppergrass (*Lepidium perfolatum*), Hood's phlox, and Beckwith's milkvetch.

Tall shrubs

The tall shrub community is made up of a mixed stand of Booth's willows (*Salix boothii*), wild rose (*Rosa woodsii*), and golden current (*Ribes aureum*). These areas are located down in the canyons, along perennial streams or other wetland areas. These areas generally have a mix of understory cover, including, sweet bedstraw, western mugwort (*Artemisia douglasiana*), yarrow (*Achillea millefolium*), mint (*Mondellara odoratissima*), arrow-leaf groundsel (*Senecio triangualrus*) sedges (*Carex* ssp.), and rushes (*Juncus* ssp.).

Grasslands

Crested wheatgrass
(*Agropyron cristatum*)

The crested wheatgrass (*Agropyron cristatum*) community is a planted non-native community located in large areas that have been burned by wildfire. These areas do not have any shrubs, but consist of grasses and forbs. The dominate grass is crested wheatgrass, generally with an undestory of Sandberg's bluegrass. Other species that may be found within the areas are Hood's phlox, flax (*Linum* ssp.), lupine, alfalfa (*Medicago* ssp.), and cheatgrass (*Bromus tectorum*).

Intemediate wheatrass
(*Agropyron intermedium*)

The intermediate wheatgrass community is dominated by a seeded, non-native grass. It may also have a small amount of rabbitbrush as a shrub component. The intermediate wheatgrass community had a dominate understory of Sandberg's bluegrass and bluebunch wheatgrass. Other species included: medicago, Hood's phlox, tragopogon, bottlebrush squirreltail and cheatgrass.

Cheatgrass
(*Bromus tectorum*)

The cheatgrass community is located in areas that have been highly disturbed and native vegetation has been replaced. The species diversity within these sites are very limited, with no shrubs, and generally few forbs, as cheatgrass is highly competitive. The few other species that may be found growing in the cheatgrass community include tumbledustard (*Sisymbrium altissimum*), common clasping-leaf peppergrass, tumbleweed (*Salsola kali*), and some Sandberg's bluegrass.

Bluebunch wheatgrass
(*Agropyron spicatum*)

The bluebunch wheatgrass community type is located on the eastern slopes at the Grasmere site. These areas are dominated by bluebunch wheatgrass and other native bunchgrasses and only have a small amount of rabbitbrush in limited areas. Other native grasses such as needle and thread grass (*Stipa comata*), Sandberg's bluegrass, Idaho fescue, and Indian ricegrass may also be found within this community. Forbs found within this community include: tailcup lupine, threadstalk milkvetch, Hood's phlox, arrowleaf balsamroot (*Balsamorhiza sagittata*), hawksbeard (*Crepis acuminata*), and nettle-leaf horsemint.

Sedge/Rush meadow
(*Carex/Juncus* ssp.)

The sedge/rush meadow communities are located near sources of water. These areas, such as streams, or seeps provide the moisture required for these hydric plants. No shrubs are found within these community types; however, in addition to a wide variety of sedges and rushes, many forbs may be found. These include: western mugwort, yarrow, mint, dock (*Rumex* ssp.), dwarf miner's lettuce (*Monita dichotoma*), fountain miner's lettuce (*M. fontana*) common large monkeyflower (*Mimulus guttatus*.), clover (*Trifolium* ssp.) and wild iris (*Iris missouriensis*).

Other

Tumble mustard
(*Sisymbrium altissimum*)

The tumble mustard community occupies areas that have been recently burned. This area is specifically located on the western, steeper slopes of the Clover Butte site. This community is a dense stand of tumble mustard, with a small amount of crested wheatgrass that has been planted. Additional species that are found in small amounts include: Sandberg's bluegrass, cheatgrass, tragopogon, Hood's phlox, and medicago.

Bare ground

The area has been burned recently and has little or no vegetation present.

Summary of Impacts for Vegetation, Wetlands, and Rare Plants

No Action	Clover Butte	Grasmere	Juniper Butte
<i>Primary Ordinance Impact Areas</i>	<i>Primary Ordinance Impact Areas</i>	<i>Primary Ordinance Impact Areas</i>	<i>Primary Ordinance Impact Areas</i>
<ul style="list-style-type: none"> - No changes to baseline conditions - No impacts 	<ul style="list-style-type: none"> - Elimination of 24 acres native vegetation - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Elimination of 15 acres of native vegetation - Direct impacts to 2.4 miles of "Waters of the U.S." - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Elimination of 169 acres of native vegetation - Direct impacts to 2.4 miles of "Waters of the U.S." - No impacts to wetlands - Elimination of 7.3 acres of one rare plant population.
<i>Training Ranges</i>	<i>Training Ranges</i>	<i>Training Ranges</i>	<i>Training Ranges</i>
<ul style="list-style-type: none"> - No changes to baseline conditions - No impacts 	<ul style="list-style-type: none"> - Potential indirect impacts to 4,197 acres of native vegetation. - Potential indirect impact to 1.2 acres of wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Potential indirect impacts to 7,609 acres of native vegetation - Indirect impacts to 30.7 acres of wetlands - Potential for indirect impacts to 5 rare plant populations 	<ul style="list-style-type: none"> - Potential indirect impact on 1,706 acres of native vegetation - No impacts to wetlands - Potential for indirect impacts to one rare plant population
<i>Simulated Target Areas</i>	<i>Simulated Target Areas</i>	<i>Simulated Target Areas</i>	<i>Simulated Target Areas</i>
<ul style="list-style-type: none"> - No changes to baseline conditions - No impacts 	<ul style="list-style-type: none"> - Removal of 5 acres of native vegetation - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - No impact to native vegetation - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Removal of 5 acres of native vegetation - No impacts to wetlands - No impacts to rare plants
<i>Emitter Sites</i>	<i>Emitter Sites</i>	<i>Emitter Sites</i>	<i>Emitter Sites</i>
<ul style="list-style-type: none"> - No changes to baseline conditions - No impacts 	<ul style="list-style-type: none"> - Removal of 4.25 acres of native vegetation - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Removal of 4.25 acres of native vegetation - No impacts to wetlands - No impacts to rare plants 	<ul style="list-style-type: none"> - Removal of 4.25 acres of native vegetation - No impacts to wetlands - No impacts to rare plants
<i>Roads and powerlines</i>	<i>Roads and Powerlines</i>	<i>Roads and Powerlines</i>	<i>Roads and Powerlines</i>
<ul style="list-style-type: none"> - No changes to baseline conditions - No impacts 	<ul style="list-style-type: none"> - Direct impacts on 515 acres of native vegetation - Direct impacts on 49 intermittent streams and 1 perennial stream from new and upgraded road crossings - No impact to rare plants 	<ul style="list-style-type: none"> - Direct impacts on 511 acres of native vegetation - Direct impacts on 56 intermittent streams and 1 perennial stream from new and upgraded road crossings - No impacts to rare plants 	<ul style="list-style-type: none"> - Direct impacts on 522 acres of native vegetation - Direct impacts on 58 intermittent streams and 1 perennial stream from new and upgraded road crossings - No impacts to rare plants

Table L-1. Emitter and No-Drop Sites

1 of 2

Emitter and Size (acres)	TRS	UTM	Quad	Elevation (feet)	Wetlands (within one mile)	Soil Type	Hydric Soils	Rare Plants	Vegetation Type	New Roads
AA .25	T9S R10E S2	472527 643393	Notch Butte	3,960	No	148-Sidlake/Bruncan Complex	No	No	Crested wheatgrass Cheatgrass	Yes
AB .25	T9S R7E S27	4718173 614047	Winter Camp	3,980	No	185-Typic Torrip Samments/Typic Torrifluvents	Yes On site	No	Cheatgrass	Yes
AC .25	T10S R9E S36	4708182 6251499	Crows Nest Butte	4,355	No	144-Shano/Owsel Complex	No	No	Crested wheatgrass	No
AD .25	T12S R9E S35	4687459 634779	Juniper Butte	4,990	Yes None on site	75-Hardtrigger/Snowmore Vickery/Complex	No	No	Crested wheatgrass	Yes
AE .25	T13S R9E S17	4683095 630159	Clover Butte South	5,000	No	31-Bruncan/Snowmore Silt Loams	No	No	Crested wheatgrass	Yes
AF .25	T13S R8E S2	4687488 625382	Clover Butte South	4,870	Yes None on site	75-Hardtrigger/Snowmore/Vickery Complex	No	No	Tumble mustard	Yes
AG .25	T12S R9E S32	4687903 630482	Clover Butte South	4,885	No	75-Hardtrigger/Snowmore/Vickery Complex	No	No	Crested wheatgrass	No
AH .25	T10S R9E S30	4709179 628029	Hodge Station	4,315	No	120-Purdum Silt Loam	No	No	Tumble mustard	Yes
AI .25	T9S R9E S31	4718182 627710	Hodge Station	4,280	Yes None on site	113-Owsel/Purdum Complex		No	Cheatgrass	No
AJ .25	T10S R9E S36	4707180 626657	Crows Nest Butte	4,410	No	35-Colthorp/Minveno Stony Silt Loams	No	No	Sandberg bluegrass	No
AK .25	T9S R6E S8	4722782 600774	Broken Wagon Flat	3,720	Yes None on site	135-Royal Davey Complex	No	No	Wyoming big sagebrush / Cheatgrass	No
AL .25	T9S R6E S21	4719588 601087	Table Butte	3,770	No	146-Shoofly Loam	No	No	Wyoming big sagebrush / Shadescale Cheatgrass	No
AM .25	T11S R5E S24	4700429 598003	Blackstone Reservoir	4,928	Yes None on site	182-Troughs/Sugarcreek Association	No	No	Cheatgrass	No
AN .25	T11S R5E S8	4703829 590818	Grasmere	5,048	No	210-Willhill/Cottle Association	No	No	Cheatgrass	Yes
AO .25	T10S R5E S17	4712240 590901	Wickahoney Crossing	4,830	No	210-Willhill/Cottle Association	No	No	Crested wheatgrass	Yes
AP .25	T11S R4E S17	4703110 591529	Grasmere	5,030	Yes None on site	210-Willhill/Cottle Association	No	No	Gravel	No
AQ .25	T13S R5E S24	4680907 597525	Buster Butte	5,250	No	32-Bruncan Troughs Very Stony Loams	No	No	Sandberg bluegrass	Yes
AU .25	T13S R4E S13	468292 587160	Grasmere Reservoir	5,800	Yes None on site	207-Wickahoney/Zecanyon Complex	No	No	Bareground	No
AV .25	T12S R4E S13	469295 585512	Grasmere	5,290	Yes None on site	204-Wickahoney Monsterial/Yatahoney Association	No	No	Low sagebrush	No

Table L-1. Emitter and No-Drop Sites

2 of 2

Emitter and Size (acres)	TRS	UTM	Quad	Elevation (feet)	Wetlands (within one mile)	Soil Type	Hydric Soils	Rare Plants	Vegetation Type	New Roads
BA 1.0	T9S R8E S22	4720328 622577	Pot Hole Butte	4,915	No	35-Colthorp/Minveno Stony Silt Loams	No	No	Cheatgrass	No
BB 1.0	T8S R9E S34	4727345 632414	Black Butte West	4,207	No	31-Colthorp Stony Silt Loams	No	No	Crested wheatgrass	No
BC 1.0	T12S R8E S2	4697134 624329	Clover Butte North	5,080	Yes None on site	75-Hardtrigger/Snowmore/Vickery Complex	No	No	Crested wheatgrass	Yes
BD 1.0	T15S R6E S21	4662857E 602506	Black Leg	5,680	No	23-Brace/Freshwater Complex	No	No	Sandberg bluegrass / Wyoming big sagebrush	No
BE 1.0	T14S R10E S29	4670639 638510	Mosquito Lake Butte	5,540	No	82-Heckison/Freshwater Complex	No	No	Cheatgrass	Yes
BF 1.0	T9S R6E S15	4721606 602776	Crowbar Gulch		No	158-Trevino/Minidoka Complex	No	No	Crested wheatgrass / Shadescale	Yes
BG 1.0	T11S R5E S32	469656 594553	Grasmere	5,160	No	181-Troughs/Owsel Complex	No	No	Wyoming big sagebrush	Yes
BI 1.0	T11S R4E S23	4700285 585326	Grasmere	5,260	No	27-Bruncan/Hardtrigger/Buncelvoir Complex	No	No	Cheatgrass	Yes
BJ 1.0	T13S R9E S36	4979948 635935	Juniper Butte	5,460	No	82-Heckison/Freshwater Complex	No	No	Bluebunch wheatgrass	Yes
BK 1.0	T8S R12E S21	660800 47312	Crows Nest NE	3,600	No	113-Owsel/Purdum Complex	No	No	Bareground	No
ND-1 640.0	T9S R6E S21	4720403 601898	Broken Wagon Flat and Table Butte	3,740	No	158-Trevino/Minidoka Complex 146-Shoofly Loam	No	No	Crested wheatgrass	No
ND-2 5.0	T13S R9E S23	4691453 627428	Juniper Butte	5,470	No	82-Heckison/Freshwater Complex	No	No	Cheatgrass	Yes
ND-4 5.0	T12S R4E S14	4692954 585512	Grasmere	5,290	Yes None on site	204-Wickahoney/Monsterio/Yatahoney Association	No	No	Low sagebrush/ Sandberg bluegrass	Yes
ND-5 5.0	T11S R4E S23	4700193 586657	Grasmere	5,180	No	27-Bruncan/Hardtrigger/Buncelvoir Complex	No	No	Crested wheatgrass	Yes
ND-6 5.0	T13S R9E S17	4683185 629393	Clover Butte South	5,000	No	31-Bruncan/Snowmore Silt Loams	No	No	Crested wheatgrass	Yes
ND-7 5.0	T12S R9E S19	4691453 627428	Clover Butte South	4,900	No	75-Hardtrigger/Snowmore/Vickery Complex	No	No	Crested wheatgrass	No
ND-8	T13S R4E S13	468298 58716	Grasmere Reservoir	5,800	Yes None on site	207-Wickahoney/Zecanyon Complex	No	No	Bareground	No

Table L-2. Rare Plants With the Potential to Occur in ROI 1

Species	Federal Status	BLM Status	INPS Rank	ICDC Rank	County Distribution
Vascular Plants					
Annual salt buckwheat (<i>Eriogonum salicornioides</i>)	-		R	G3/S3	Bl, Bu, Ca, El, Ow
Bacigalupi's downingia (<i>Downingia bacigalupii</i>)	-		1	G3G4/SU	Ow, Li, Go
Davis' peppergrass (<i>Lepidium davisii</i>)	-	S		G3/S3	As, El, Ow, Tw
Dimeresia (<i>Dimeresia howellii</i>)	-	S	2	G4/S1	Ow
Dwarf rabbitbrush (<i>Chrysothamnus humilis</i>)	-		R	G3/S1	Ow
Dwarf skullcap (<i>Scutellaria nana</i> var. <i>nana</i>)	-	S	S	G4T4/S1	As, Go, Ow, Tw
Inch-high lupine (<i>Lupinus uncialis</i>)	-	S	2	G4/S1	Ow
King's desertgrass (<i>Blepharidachne kingii</i>)	-	S	1	G4/S1	Ow
Osgood Mountain milkvetch (<i>Astragalus yoder-williamsii</i>)	-	S		G2/S2	Ow
Rabbitbrush goldenweed (<i>Haplopappus bloomeri</i>)	-		R	G4/S1	Ow
Rigid threadbush (<i>Nemacladus rigidus</i>)	-	S	S	G4/S1	Ow
Simpson's hedgehog cactus (<i>Pediocactus simpsonii</i> var. <i>robustior</i>)	-	S	M	G4T4/S3	Cs, Ne, On, Ow, Tw
Slick spot peppergrass (<i>Lepidium papilliferum</i>)	-	S		G2/S2	Aa, Ba, Cn, El Ge, Pa
Spine-noded milkvetch (<i>Peteria thompsoniae</i>)	-	S	1	G4/S1	Ow

Table L-2. Rare Plants With the Potential to Occur in ROI 1

Species	Federal Status	BLM Status	INPS Rank	ICDC Rank	County Distribution
Stiff milkvetch (<i>Astragalus conjunctus</i>)	-		R	G5/S2?	Ow
Stylocline (<i>Stylocline filaginea</i>)	-	S	M	G4/S2	Aa, Bl, El, Go, Li, Ow
Trout Creek milkvetch (<i>Astragalus salmonis</i>)	-	S		G4/S1	Ow
White eatonella (<i>Eatonella nivea</i>)	-	S	S	G4/S3	As, Cu, El, Ow
Nonvascular Plants					
Southern mudwort (<i>Limosella acaulis</i>)	-		S	Unranked	Ow
Texosporium (<i>Texosporium sancti-jacobi</i>)	-	S	S	G22/S2	Ad, El

Definitions

1. BLM Status (Moseley and Groves 1992)

Plants on the Idaho State Office, Bureau of Land Management Sensitive Species List. Definition is as follows:

S= Sensitive species, as defined by the BLM are those who meet any of the following criteria (Moseley and Groves 1992): (1) species currently under status review by the USFWS/ National Marine and Fisheries Service; (2) species whose numbers are declining so rapidly that federal listing may become necessary; (3) species who typically have small and widely dispersed populations; or (4) species who inhabit ecological refugia or other specialized habitats.

2. Idaho Native Plant Society Categories (INPS 1996)

1 = State Priority 1 Taxa in danger of becoming extinct or extirpated from Idaho in the foreseeable future if identifiable factors contributing to their decline continue to operate; these are taxa whose populations are present only at critically low levels or whose habitats have been degraded or depleted to a significant degree.

2 = State Priority 2 Taxa likely to be classified as Priority 1 within the foreseeable future in Idaho if factors contributing to their population decline or habitat degradation or loss continue.

S = Sensitive Taxa with small populations or localized distributions within Idaho that presently do not meet the criteria for classification as Priority 1 or 2, but whose populations and habitats may be jeopardized without active management or removal of threats.

M = Monitor Taxa that are common within a limited range as well as those taxa which are uncommon, but have no identifiable threats.

R = Review Taxa which may be of conservation concern, but for which we have insufficient data upon which to base a recommendation regarding their appropriate classification.

X = Historical/Extirpated Taxa which are known in Idaho only from historical (pre-1920) records or are considered extirpated from the state.

3. Idaho Conservation Data Center (ICDC) (Moseley and Groves 1992)

- G** = Global rank indicator; denotes rank based on rangewide status.
T = Trinomial rank indicator; denotes rangewide status of subspecific taxa.
S = State rank indicator; denotes rank based on status within Idaho.
1 = Critically imperiled because of extreme rarity or because of some factor of its biology making it especially vulnerable to extinction.
2 = Imperiled because of rarity or because of other factors demonstrably making it very vulnerable to extinction.
3 = Either very rare and local throughout its range or found locally in a restricted range or because of other factors making it vulnerable to extinction.
4 = Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
5 = Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
U = Unknown
H = Of historical occurrence (i.e., formerly part of the native biota with the implied expectation that it may be rediscovered)

5. County Distribution Codes (Moseley and Groves 1992)

Ada	Aa	Gem	Ge
Adams	As	Gooding	Go
Bannock	Ba	Idaho	Id
Bear Lake	Bl	Jefferson	Jf
Benewah	Bw	Jerome	Jr
Bingham	Bi	Kootenai	Ko
Blaine	Bl	Latah	La
Boise	Bo	Lemhi	Lm
Bonner	Bn	Lewis	Lw
Bonneville	Bv	Lincoln	Li
Boundary	Bd	Madison	Ma
Butte	Bu	Minidoka	Mi
Camas	Cm	Nez Perce	Ne
Canyon	Cn	Oneida	On
Caribou	Cb	Owyhee	Ow
Cassia	Cs	Payette	Pa
Clark	Ck	Power	Po
Clearwater	Cw	Shoshone	Sh
Custer	Cu	Teton	Te
Elmore	El	Twin Falls	Tw
Franklin	Fk	Valley	Va
Fremont	Fm	Washington	W

Table L-3. Large Mammal Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Black Bear	<i>Ursus Americanus</i>								X		
*California Bighorn Sheep	<i>Ovis canadensis californiana</i>		X _D		X _D	X				X	
Cougar	<i>Felis concolor</i>		X _D	X	X	X				X	
Elk	<i>Cervus elaphus</i>			X _D	X _D				X		X
Mule Deer	<i>Odocoileus hemionus</i>	X _D	X _D	X _D	X _D	X				X	X
Pronghorn Antelope	<i>Antilocapra americana</i>	X _D	X _D	X _D	X _D	X					X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. *Species has special status (see section 3.8.11).

Table L-4. Furbearing Mammals and Small Carnivore Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Badger	<i>Taxidea taxus</i>	X _D	X _D	X _D	X _D	X	X				
Beaver	<i>Castor canadensis</i>				X			X	X		
Bobcat	<i>Felis rufus</i>		X		X				X	X	
Coyote	<i>Canis latrans</i>	X _D	X _D	X _D	X _D	X	X	X	X	X	X
*Kit Fox	<i>Vulpes macrotis</i>				X	X					
Mink	<i>Mustela vison</i>		X		X			X			
Muskrat	<i>Ondatra zibethicus</i>				X			X			
Red Fox	<i>Vulpes vulpes</i>		X _D		X	X		X	X		X
River Otter	<i>Lutra canadensis</i>				X			X			
Raccoon	<i>Procyon lotor</i>				X			X	X		X
Western Spotted Skunk	<i>Spilogale gracilis</i>		X		X			X	X		X
Striped Skunk	<i>Mephitis mephitis</i>		X		X			X	X		X
Long-tailed Weasel	<i>Mustela frenata</i>		X _D	X	X			X		X	

Table L-4. Furbearing Mammals and Small Carnivore Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF AG
Short-tailed Weasel	<i>Mustela erminea</i>		X	X	X			X		X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (Xp). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. *Species has special status (see section 3.8.11).

Table L-5. Bat Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Big Brown Bat	<i>Eptesicus fuscus pallidus</i>	X	X _D	X	X _D	X	X	X	X	X	X
California Myotis	<i>Myotis californicus</i>	X	X _D	X	X _D	X		X	X	X	
Hoary Bat	<i>Lasiurus cinereus</i>	X	X	X	X			X	X		
*Fringed Myotis	<i>Myotis thysanodes</i>	X	X	X	X	X	X	X	X	X	
Little Brown Myotis	<i>Myotis lucifugus carissima</i>	X	X	X	X _D	X			X	X	
*Long-eared Myotis	<i>Myotis evotis</i>	X	X _D	X	X _D	X		X	X	X	X
*Long-legged Myotis	<i>Myotis volans interior</i>	X	X _D	X	X _D	X		X	X	X	
Pallid Bat	<i>Antrozous pallidus cantuelli</i>	X	X	X	X _D	X	X	X		X	X
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	X	X	X	X			X	X		
*Spotted Bat	<i>Euderma maculatum</i>	X	X _D	X	X _D	X	X	X	X	X	X
*Townsend's big-eared Bat	<i>Corynorhinus townsendii pallascens</i>	X	X	X	X	X		X	X		
Western Pipistrelle	<i>Pipistrellus hesperus hesperus</i>	X	X	X	X _D			X		X	

Table L-5. Bat Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF AG
*Western Small-footed Myotis	<i>Myotis ciliolabrum</i>	X	X _D	X	X _D	X		X	X	
*Yuma Myotis	<i>Myotis yumanensis sociabilis</i>	X	X	X	X _D	X	X	X		X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. Species' habitat associations are based on Hoffmeister 1986, Zeveloff 1988, Calif. Hab. Assoc. *Species has special status (see section 3.8.11).

Table L-6. Small Mammal Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Merriam Shrew	<i>Sorex merriami</i>	X	X	X	X	X	X			X	
Water Shrew	<i>Sorex palustris</i>		X		X			X			
Vagrant Shrew	<i>Sorex vagrans</i>	X	X	X	X	X	X	X	X	X	
Montane Shrew	<i>Sorex monticolus</i>	X	X _D		X _D	X		X	X		
Long-tailed Vole	<i>Microtus longicaudus</i>	X	X _D		X _D	X		X		X	
Montane Vole	<i>Microtus montanus</i>	X	X	X	X _D	X	X	X	X	X	X
Sagebrush Vole	<i>Lagurus curtatus</i>	X	X _D	X _D	X _D	X	X		X		
Deer Mouse	<i>Peromyscus maniculatus</i>	X	X _D	X _D	X _D	X	X	X	X	X	X
Canyon Mouse	<i>Peromyscus crinitus</i>		X	X	X			X		X	
Pinyon Mouse	<i>Peromyscus truei</i>					X		X	X		
Great Basin Pocket Mouse	<i>Perognathus parvus</i>	X	X _D	X _D	X _D	X		X			
Little Pocket Mouse	<i>Perognathus longimembris</i>					X	X	X	X		
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	X	X	X	X	X	X	X	X	X	
Jumping Mouse	<i>Zapus princeps</i>	X	X	X	X	X	X	X			

Table L-6. Small Mammal Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>	X	X	X	X	X	X	X		X	
Ord Kangaroo Rat	<i>Dipodomys ordii</i>	X	X _D	X _D	X _D	X		X	X		
Chisel-tooth Kangaroo Rat	<i>Dipodomys microps</i>					X		X	X		
*Dark Kangaroo Mouse	<i>Microdipodops megacephalus</i>					X					
Desert Woodrat	<i>Neotoma lepida</i>	X	X			X				X	
Bushytail Woodrat	<i>Neotoma cinerea</i>	X	X	X _D	X _D			X	X	X	
Townsend's Pocket Gopher	<i>Thomomys townsendii</i>							X		X	
Northern Pocket Gopher	<i>Thomomys talpoides</i>	X	X	X	X	X	X	X	X	X	X
Least Chipmunk	<i>Tamias minimus</i>	X	X _D	X	X _D	X		X	X	X	
Yellow Pine Chipmunk	<i>Tamias amoenus</i>	X	X		X	X		X	X		
Whitetail Antelope Squirrel	<i>Ammospermophilus leucurus</i>	X	X	X	X	X	X	X	X	X	
Golden-mantled Ground	<i>Spermophilus lateralis</i>	X	X		X	X		X	X		

Table L-6. Small Mammal Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Squirrel											
Belding's Ground Squirrel	<i>Spermophilus beldingi</i>	X	X	X	X	X	X	X	X	X	X
Wyoming Ground Squirrel	<i>Spermophilus elegans</i>	X	X	X	X	X	X	X		X	X
Townsend's Ground Squirrel	<i>Spermophilus townsendii</i>	X	X	X	X	X			X	X	X
Yellowbelly Marmot	<i>Marmota flaviventris</i>	X	X	X	X	X	X	X	X	X	
*Pygmy Rabbit	<i>Sylvilagus idahoensis</i>		X		X	X					
Mountain Cottontail	<i>Sylvilagus nuttallii</i>	X	X _D	X _D	X _D	X		X	X	X	
Black-tailed Jackrabbit	<i>Lepus californicus</i>	X	X	X	X	X			X		
White-tailed Jackrabbit	<i>Lepus townsendii</i>	X	X _D	X	X _D	X	X	X			
Porcupine	<i>Erethizon dorsatum</i>		X		X	X		X	X		
Norway Rat	<i>Rattus norvegicus</i>				X						X
House Mouse	<i>Mus musculus</i>				X						X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. Species' habitat associations are based on Zeveloff 1988, Burt 1980, Calif. Hab. Assoc. *Species has special status (see section 3.8.11).

Table L-7. Upland Game Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
*Sage Grouse	<i>Centrocercus cerophasianus</i>	X _D	X _D	X _D	X _D	X	X	X			X
*Columbian Sharp-tailed Grouse	<i>Tympanuchus phasianellus columbianus</i>					X	X	X			X
Gray Partridge	<i>Perdix perdix</i>				X	X	X	X			X
Chukar Partridge	<i>Alectoris chukar</i>		X _D	X	X _D	X	X			X	X
*Mountain Quail	<i>Oreortyx pictus</i>				X			X	X		X
California Quail	<i>Callipepla californica</i>		X	X	X			X			X
Ring-necked Pheasant	<i>Phasianus colchicus</i>				X			X			X
Mourning Dove	<i>Zenaidura macroura</i>		X _D	X	X	X		X			X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. *Species has special status (see section 3.8.11).

Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Common Loon	<i>Gavia immer</i>				M			X			
Western Grebe	<i>Aechmophorus occidentalis</i>				B _D			X			
Clark's Grebe	<i>Aechmophorus clarkii</i>				B _D			X			
Pied-billed Grebe	<i>Podilymbus podiceps</i>				Y			X			
Horned Grebe	<i>Podiceps auritus</i>				M			X			
Eared Grebe	<i>Podiceps nigricollis</i>				B _D			X			
American White Pelican	<i>Pelecanus erythrorhynchos</i>				B _D			X			
Double-crested Cormorant	<i>Phalacrocorax auritus</i>		X _D		M _D			X			
American Bittern	<i>Botaurus lentiginosus</i>				B			X			
Great Blue Heron	<i>Ardea herodias</i>				Y _D			X			
Great Egret	<i>Casmerodius albus</i>				M _D			X			
Cattle Egret	<i>Bobulcus ibis</i>				M			X			
Snowy Egret	<i>Egretta thula</i>				B _D			X			

Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>				B _D			X			
*White-faced Ibis	<i>Plegadis chihi</i>		X _D		B _D			X			X
*Trumpeter Swan	<i>Cygnus buccinator</i>				M			X			
Tundra Swan (Whistling)	<i>Cygnus columbianus</i>		X _D		W _D			X			
Canada Goose	<i>Branta canadensis</i>				Y			X			X
Snow Goose	<i>Chen caerulescens</i>		X _D		M _D			X			
Greater White-fronted Goose	<i>Anser albifrons</i>				W			X			
Ross' Goose	<i>Chen rossii</i>		X _D		M _D			X			
Wood Duck	<i>Aix sponsa</i>				M			X			
Green-winged Teal	<i>Anas crecca</i>				Y			X			
Mallard	<i>Anas platyrhynchos</i>				Y _D			X			
Northern Pintail	<i>Anas acuta</i>				Y			X			
Blue-winged Teal	<i>Anas discors</i>				B			X			

Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Cinnamon Teal	<i>Anas cyanoptera</i>				B			X			
Northern Shoveler	<i>Anas clypeata</i>				B			X			
Gadwall	<i>Anas strepera</i>				Y			X			
American Wigeon	<i>Anas americana</i>				B			X			
Canvasback	<i>Aythya valisineria</i>				Y			X			
Redhead	<i>Aythya americana</i>				B			X			
Ring-necked Duck	<i>Aythya collaris</i>				M			X			
Lesser Scaup	<i>Aythya affinis</i>				B			X			
Common Goldeneye	<i>Bucephala clangula</i>				W _{D?}			X			
Barrow's Goldeneye	<i>Bucephala islandica</i>				M			X			
Bufflehead	<i>Bucephala albeola</i>				W			X			
Hooded Merganser	<i>Lophodytes cucullatus</i>				M			X			
Common Merganser	<i>Mergus merganser</i>				Y			X			
Red-breasted Merganser	<i>Mergus serrator</i>				M			X			

Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Ruddy Duck	<i>Oxyura jamaicensis</i>				B			X			
Virginia Rail	<i>Rallus limicola</i>				B			X			
Sora	<i>Porzana carolina</i>				B			X			
American Coot	<i>Fulica americana</i>				B _D			X			
Sandhill Crane	<i>Grus canadensis</i>				B			X			X
Black-bellied Plover	<i>Pluvialis squatarola</i>				M			X			
Snowy Plover	<i>Charadrius alexandrinus</i>				B			X			
Semipalmated Plover	<i>Charadrius semipalmatus</i>				M			X			
Killdeer	<i>Charadrius vociferus</i>		X _D		B _D			X			
Black-necked Stilt	<i>Himantopus mexicanus</i>				B			X			
American Avocet	<i>Recurvirostra americana</i>				B			X			
Greater Yellowlegs	<i>Tringa melanoleuca</i>				M			X			
Lesser Yellowlegs	<i>Tringa flavipes</i>				M			X			
Solitary Sandpiper	<i>Tringa solitaria</i>				M			X			

**Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three)
and Their Habitat Associations**

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Willet	<i>Catoptrophorus semipalmatus</i>				B			X			
Spotted Sandpiper	<i>Actitis macularia</i>				B			X			
*Long-billed Curlew	<i>Numenius americanus</i>	X	X	X	B	X	X	X			X
Marbled Godwit	<i>Limosa fedoa</i>				M			X			
Sanderling	<i>Calidris alba</i>				M			X			
Semipalmated Sandpiper	<i>Calidris pusilla</i>				M			X			
Western Sandpiper	<i>Calidris mauri</i>				M			X			
Least Sandpiper	<i>Calidris minutilla</i>				M			X			
Baird's Sandpiper	<i>Calidris bairdii</i>				M			X			
Dunlin	<i>Calidris alpina</i>				M			X			
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>				M			X			
Common Snipe	<i>Gallinago gallinago</i>		X _D		B _D			X			
Wilson's Phalarope	<i>Phalaropus tricolor</i>				B			X			

Table L-8. Waterbird Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Red-necked Phalarope	<i>Phalaropus lobatus</i>				M			X			
Franklin's Gull	<i>Larus pipixcan</i>				B			X			
Bonaparte's Gull	<i>Larus philadelphia</i>				M			X			
Ring-billed Gull	<i>Larus delawarensis</i>				B _D ?			X			
California Gull	<i>Larus californicus</i>				B			X			
Caspian Tern	<i>Sterna caspia</i>				B			X			
Forster's Tern	<i>Sterna forsteri</i>				B _D			X			
*Black Tern	<i>Chlidonias niger</i>				B _D			X			

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X₀). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. Species' habitat associations are based on Stephens and Sturts 1991, Trost and Gerstell 1994, Will 1995, Calif. Hab. Assoc. *Species has special status (see section 3.8.11).

B = Potentially breeds in or migrates through ROI Two

Y = Potentially found in year-round (breeding, migrating, wintering) in ROI Two

M = Potentially only migrates through ROI Two

W = Potentially winters in or migrates through ROI Two

Table L-9. Raptor Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
American Kestrel	<i>Falco sparverius</i>	X	X _D	X	X _D	X	X	X	X	X	X
*Bald Eagle	<i>Haliaeetus leucocephalus</i>				X _D			X		X	
*Western Burrowing Owl	<i>Speotyto cunicularia hypugaea</i>	X _D	X _D	X	X _D	X	X				X
Barn Owl	<i>Tyto alba</i>		X		X	X	X		X	X	
Cooper's Hawk	<i>Accipiter cooperii</i>		X	X _D	X _D			X	X		
*Ferruginous Hawk	<i>Buteo regalis</i>		X _D	X _D	X _D	X	X			X	
Flammulated Owl	<i>Otus flammeolus</i>								X		
Great Horned Owl	<i>Bubo virginianus</i>		X	X	X			X	X	X	
Golden Eagle	<i>Aquila chrysaetos</i>	X _D	X _D	X _D	X _D	X	X	X		X	X
Gyr Falcon	<i>Falco rusticolus</i>		X		X _D			X			
Long-eared Owl	<i>Asio otus</i>		X		X			X	X	X	

Table L-9. Raptor Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations												
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG	
Merlin	<i>Falco columbarius</i>		X		X _D	X	X			X		
*Northern Goshawk	<i>Accipiter gentilis</i>		X		X			X	X			
*Northern Harrier	<i>Circus cyaneus</i>	X _D	X _D	X _D	X _D	X	X				X	
Northern Pygmy-Owl	<i>Glaucidium gnoma</i>							X				
Northern Saw-whet Owl	<i>Aegolius acadicus</i>				X			X				
Osprey	<i>Pandion halietus</i>				X _D		X		X			
*Peregrine Falcon	<i>Falco peregrinus</i>		X		X		X		X			
*Prairie Falcon	<i>Falco mexicanus</i>	X	X _D	X	X _D	X			X	X	X	
Red-tailed Hawk	<i>Buteo jamaicensis</i>	X	X _D	X _D	X _D	X	X	X	X	X	X	
Rough-legged Hawk	<i>Buteo lagopus</i>	X	X _D	X	X _D	X	X		X	X	X	
Sharp-shinned Hawk	<i>Accipiter striatus</i>		X _D	X _D	X _D		X	X				

Table L-9. Raptor Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Short-eared Owl	<i>Asio flammeus</i>	X _D	X	X	X _D	X	X	X			X
Swainson's Hawk	<i>Buteo swainsoni</i>	X	X	X	X	X	X	X			X
Turkey Vulture	<i>Cathartes aura</i>	X	X _D	X	X _D	X	X		X	X	
Western Screech Owl	<i>Otus kennicottii</i>		X		X			X	X	X	

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. *Species has special status (see section 3.8.11).

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Mountain Bluebird	<i>Sialia currucoides</i>		X _D	X _D	X _D				X		
Townsend's Solitaire	<i>Myadestes townsendi</i>		X	X _D	X _D				X		
American Robin	<i>Turdus migratorius</i>		X _D	X _D	X _D			X	X		X
Varied Thrush	<i>Ixoreus naevius</i>				X				X		
*Swainson's Thrush	<i>Catharus ustulatus</i>				X				X		
Sage Thrasher	<i>Oreoscoptes montanus</i>	X _D	X _D	X	X	X					
Water Pipit	<i>Anthus rubescens</i>				X			X			
Bohemian Waxwing	<i>Bombycilla garrulus</i>		X		X			X	X		
Cedar Waxwing	<i>Bombycilla cedrorum</i>		X		X			X	X		
Northern Shrike	<i>Lanius excubitor</i>	X	X _D	X	X	X			X		
*Loggerhead Shrike	<i>Lanius ludovicianus</i>	X	X _D	X	X	X			X		
European Starling	<i>Sturnus vulgaris</i>		X _D		X _D	X	X				X
*Solitary Vireo	<i>Vireo solitarius</i>		X		X						

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Warbling Vireo	<i>Vireo gilvus</i>		X		X			X	X		
Red-eyed Vireo	<i>Vireo olivaceus</i>		X		X			X	X		
Orange-crowned Warbler	<i>Vermivora celata</i>		X		X			X	X		
Nashville Warbler	<i>Vermivora ruficapilla</i>		X		X			X	X		
*Yellow Warbler	<i>Dendroica petechia</i>		X		X			X	X		
Yellow-rumped Warbler	<i>Dendroica coronata</i>		X		X			X	X		
*Townsend's Warbler	<i>Dendroica townsendi</i>		X		X			X	X		
*MacGillivray's Warbler	<i>Oporornis tolmiei</i>		X		X			X	X		
Common Yellowthroat	<i>Geothlypis trichas</i>		X		X			X			
*Black-throated Gray Warbler	<i>Dendroica nigrescens</i>				X				X		
*Wilson's Warbler	<i>Wilsonia pusilla</i>		X		X			X			
Yellow-breasted Chat	<i>Icteria virens</i>		X _D		X			X			
Western Tanager	<i>Piranga ludoviciana</i>		X		X			X	X		

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>		X		X			X	X		
Lazuli Bunting	<i>Passerina amoena</i>		X		X	X		X	X		
Spotted Towhee	<i>Pipilo erythrophthalmus</i>		X		X			X	X		
*Green-tailed Towhee	<i>Pipilo chlorurus</i>		X		X	X		X	X		
American Tree Sparrow	<i>Spizella arborea</i>		X		X			X	X		
Chipping Sparrow	<i>Spizella passerina</i>		X		X			X	X		
*Brewer's Sparrow	<i>Spizella breweri</i>	X _b	X _b	X	X	X	X				
Lark Sparrow	<i>Chondestes grammacus</i>	X	X	X	X	X	X		X		X
Black-throated Sparrow	<i>Amphispiza bilineata</i>	X	X	X	X	X	X				
*Sage Sparrow	<i>Amphispiza belli</i>	X _b	X _b	X	X	X	X				
Vesper Sparrow	<i>Pooecetes gramineus</i>	X	X	X	X	X	X				
Lark Bunting	<i>Calamospiza melanocorys</i>	X	X	X	X	X	X				

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Savannah Sparrow	<i>Passerculus sandwichensis</i>	X	X	X	X	X	X	X			X
Song Sparrow	<i>Melospiza melodia</i>		X		X			X			
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>		X		X				X		
*Grasshopper Sparrow	<i>Ammodramus savannarum</i>	X	X	X	X		X				X
Snow Bunting	<i>Plectrophenax nivalis</i>		X _D		X _D			X	X		X
Dark-eyed Junco	<i>Junco hyemalis</i>		X	X _D	X				X		
*Bobolink	<i>Dolichonyx oryzivorus</i>	X	X	X	X	X	X	X			X
Red-winged Blackbird	<i>Agelaius phoeniceus</i>		X		X			X			X
Western Meadowlark	<i>Sturnella neglecta</i>	X _D	X _D	X _D	X _D	X	X				X
*Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>		X		X			X			
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	X	X _D	X	X	X	X	X	X		X

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Brown-headed Cowbird	<i>Molothrus ater</i>	X _D	X	X	X	X	X	X	X		X
Northern Oriole	<i>Icterus galbula</i>		X		X			X	X		
Rosy Finch	<i>Leucosticte arctoa</i>		X		X			X		X	
House Finch	<i>Carpodacus mexicanus</i>		X		X			X		X	X
American Goldfinch	<i>Carduelis tristis</i>		X		X			X	X		
Pine Siskin	<i>Carduelis pinus</i>		X _D		X _D			X	X		X
Evening Grosbeak	<i>Coccothraustes vespertinus</i>		X		X			X			
*Yellow-billed Cuckoo	<i>Coccyzus americanus</i>		X		X			X			
Common Nighthawk	<i>Chordeiles minor</i>	X _D	X _D	X	X	X	X				
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	X	X _D	X	X	X	X		X		
White-throated Swift	<i>Aeronautes saxatalis</i>	X	X	X	X	X	X	X		X	
Black-chinned Hummingbird	<i>Archilochus alexandri</i>		X		X			X	X		

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
*Calliope Hummingbird	<i>Stellula calliope</i>		X		X			X	X		
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>		X		X			X	X		
*Rufous Hummingbird	<i>Selasphorus rufus</i>		X		X			X	X		
Belted Kingfisher	<i>Ceryle alcyon</i>		X		X			X			
*Lewis' Woodpecker	<i>Melanerpes lewis</i>		X		X			X	X		
Downy Woodpecker	<i>Picoides pubescens</i>		X		X			X	X		
Hairy Woodpecker	<i>Picoides villosus</i>		X		X			X	X		
*Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>				X				X		
Northern Flicker	<i>Colaptes auratus</i>		X _D		X			X	X		
Western Wood-Pewee	<i>Contopus sordidulus</i>		X		X			X	X		
*Cordilleran Flycatcher	<i>Empidonax occidentalis</i>		X		X			X	X		
*Dusky Flycatcher	<i>Empidonax oberholseri</i>		X		X			X	X		

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
*Gray Flycatcher	<i>Empidonax wrightii</i>	X	X _D	X	X	X					
*Willow Flycatcher	<i>Empidonax traillii</i>		X		X			X			
*Hammond's Flycatcher	<i>Empidonax hammondi</i>		X		X			X	X		
Western Flycatcher	<i>Empidonax difficilis</i>		X		X			X			
Say's Phoebe	<i>Sayornis saya</i>	X	X	X	X	X					X
Western Kingbird	<i>Tyrannus verticalis</i>		X		X			X			
Eastern Kingbird	<i>Tyrannus tyrannus</i>		X		X			X			X
Horned Lark	<i>Eremophila alpestris</i>	X _D	X _D	X _D	X _D	X	X				
Tree Swallow	<i>Tachycineta bicolor</i>		X		X			X	X	X	
Violet-green Swallow	<i>Tachycineta thalassina</i>		X _D		X			X	X	X	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>		X		X	X		X		X	X
Bank Swallow	<i>Riparia riparia</i>		X		X			X			
Cliff Swallow	<i>Hirundo pyrrhonota</i>		X _D		X	X		X		X	X

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations											
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Barn Swallow	<i>Hirundo rustica</i>		X		X			X			X
Black-billed Magpie	<i>Pica pica</i>		X	X _D	X	X	X	X			X
American Crow	<i>Corvus brachyrhynchos</i>		X		X	X	X	X	X		X
Common Raven	<i>Corvus corax</i>	X _D	X _D	X _D	X	X	X	X		X	X
Black-capped Chickadee	<i>Parus atricapillus</i>		X		X			X	X		
Mountain Chickadee	<i>Parus gambeli</i>		X	X _D	X			X	X		
Bushtit	<i>Psaltirparus minimus</i>		X		X			X	X		
Red-breasted Nuthatch	<i>Sitta canadensis</i>		X		X			X	X		
Brown Creeper	<i>Certhia americana</i>		X		X			X	X		
Rock Wren	<i>Salpinctes obsoletus</i>		X _D		X					X	
Canyon Wren	<i>Catherpes mexicanus</i>		X		X					X	
House Wren	<i>Troglodytes aedon</i>		X		X			X			
Winter Wren	<i>Troglodytes troglodytes</i>		X		X			X			
Marsh Wren	<i>Cistothorus palustris</i>		X		X			X			

Table L-10. Other Bird Species that May Occur within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF AG
Golden-crowned Kinglet	<i>Regulus satrapa</i>		X _D		X			X	X	
Ruby-crowned Kinglet	<i>Regulus calendula</i>		X _D		X			X	X	

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. *Species has special status (see section 3.8.11).

Table L-11. Amphibian Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹					HABITAT CLASS ²				
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
*Western Toad	<i>Bufo boreas</i>	X	X	X	X	X	X	X	X	X	X
Woodhouse's Toad	<i>Bufo woodhousei</i>	X	X	X	X	X	X	X	X	X	X
Pacific Tree Frog	<i>Pseudacris regilla</i>	X	X _D	X	X _D	X		X	X		X
*Spotted Frog	<i>Rana pretiosa</i>		X		X			X	X		
*Northern Leopard Frog	<i>Rana pipiens</i>		X		X			X	X		X
Bullfrog	<i>Rana catesbeiana</i>		X		X			X	X		X
Great Basin Spadefoot Toad	<i>Spea intermontana</i>	X	X	X	X	X	X	X	X	X	X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_D). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4. Wildlife Habitat Species' habitat associations are based on Nussbaum et al. 1983, Stebbins 1985, Calif. Hab. Assoc. *Species has special status (see section 3.8.11).

Table L-12. Reptile Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations

Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²					
		Clover Butte	Grasmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF	AG
Rubber Boa	<i>Charina bottae</i>		X		X	X	X	X	X		
Racer	<i>Coluber constrictor</i>	X	X	X	X _D	X	X	X		X	
Western Rattlesnake	<i>Crotalus viridis</i>	X	X	X	X _D	X	X	X	X	X	X
Night Snake	<i>Hypsigena torquata</i>	X	X	X	X	X	X		X	X	
Striped Whipsnake	<i>Masticophis taeniatus</i>	X	X	X	X	X	X	X	X	X	
Gopher Snake	<i>Pituophis catenifer</i>	X	X	X	X _D	X	X	X	X	X	X
*Longnose Snake	<i>Rhinocheilus lecontei</i>	X	X	X	X	X	X	X	X	X	X
*Western Ground Snake	<i>Sonora semiannulata</i>	X	X	X	X	X	X	X	X	X	
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>		X	X	X _D	X	X	X	X	X	X
Western Whiptail Lizard	<i>Cnemidophorus tigris</i>	X	X	X	X	X	X	X	X	X	
*Mojave Black-collared Lizard	<i>Crotaphytus bicinctores</i>		X	X	X	X	X	X		X	
Western Skink	<i>Eumeces skiltonianus</i>		X		X	X	X		X		

Table L-12. Reptile Species That May Occur Within the Affected Environment (ROI Three) and Their Habitat Associations										
Common Name	Scientific Name	POTENTIAL TO OCCUR ¹				HABITAT CLASS ²				
		Clover Butte	Grassmere	Juniper Butte	ROI Two	SS	GR	WR	WD	LF AG
Long-nosed Leopard Lizard	<i>Gambelia wislizenii</i>	X	X	X	X _b	X		X	X	
Short-horned Lizard	<i>Phrynosoma douglassii</i>	X	X	X	X	X	X	X		
Desert Horned Lizard	<i>Phrynosoma platyrhinos</i>	X _b	X _b	X _b	X _b	X	X	X		
Sagebrush Lizard	<i>Sceloporus graciosus</i>	X	X	X	X _b	X	X		X	
Western Fence Lizard	<i>Sceloporus occidentalis</i>	X	X	X	X	X	X	X	X	X
Side-blotched Lizard	<i>Uta stansburiana</i>	X	X	X	X	X	X	X		X

¹Occurrence or potential to occur is based on habitat availability (X), or actual detection during field surveys or incidental sightings (X_b). ²Habitat classes include shrubsteppe (SS), grasslands (GR), wetlands and riparian (WR), woodlands (WD), lithic features (LF), and agriculture (AG) and are discussed in detail in Section 3.8.4, Wildlife Habitat. Species' habitat associations are based on Nussbaum et al. 1983, Stebbins 1985, Calif. Hab. Assoc. *Species has special status (see section 3.8.11).

APPENDIX M
PROPOSED APPROACH FOR THE AIR FORCE'S ETI
RESOURCE MANAGEMENT PLAN (RMP) AND
IMPLEMENTATION PROGRAM

Proposed Approach for the Air Force's ETI Resource Management Plan and Implementation Program

I. INTRODUCTION

The Air Force has identified three alternatives to provide enhanced training for the 366th Wing located in Mountain Home, Idaho. Each alternative consists of a 12,000-acre tactical training range, five no-drop targets, and 30 emitter sites. One of the no-drop targets is 640 acres and the other four are five acres each. Ten of the emitter sites are one acre sites, and the remaining 20 are one-quarter-acre sites. Alternatives vary only in the location of the 12,000-acre training range and the location of the four five-acre no-drop target areas. The 640-acre target area and 30 emitter sites remain the same among alternatives.

For each alternative, the Air Force proposes to withdraw only federally held lands. This refers to most of the land within the proposed 12,000-acre training ranges, the entire 640-acre no-drop target area, three or four five-acre no-drop target areas (depending on the alternative), and nine one-acre emitter sites. One of the selected five-acre no-drop target areas is located on state school endowment land and would, therefore, not be withdrawn. Alternatives B and C would include the five-acre no-drop target area located on state school endowment lands, and would thus involve the withdrawal of only three five-acre no-drop target areas. Alternative D would involve the withdrawal of four federally-owned five-acre no-drop target areas.

One of the one-acre emitter sites is located on state school endowment land and, therefore, would not be withdrawn. For use of this emitter site, the Air Force proposes to enter into a lease agreement with the State of Idaho. The Air Force also proposes to arrange lease agreements or rights-of-way for use of the remaining 20 one-quarter-acre sites.

Bureau of Land Management regulations regarding land withdrawal applications (43 CFR 2310.3-2 [b]), specify that a resource management plan and implementation program be prepared prior to final action on a withdrawal application. The regulations specifically state,

...the applicant shall prepare, with the guidance and participation of the authorized officer, and subject to the approval of the authorized officer, the Secretary and other affected departments, agencies or offices, a resource management plan and implementation program regarding the use and management of any public lands with their related resource uses. Consideration shall be given to the impact of the proposed reservation on access to and the use of the land areas that are located in the vicinity of the lands proposed to be withdrawn. Where appropriate, the plan and program will be implemented by means of a memorandum of understanding between the affected agencies. Any allocation of jurisdiction between the agencies shall be effected in the public land order or legislation.

These regulations are consistent with the Air Force's obligation to act as a responsible steward for all natural and cultural resources under its direct control. To fulfill its commitment to the

stewardship of these resources, the Air Force currently prepares Integrated Natural Resources Management Plans (INRMP) and Cultural Resources Management Plans (CRMP). An INRMP must follow the format established by Air Force Instruction (AFI) 32-7064, and requirements established in Department of Defense (DOD) and Air Force Directives. Air Combat Command also maintains guidelines for developing INRMPs. CRMPs must be prepared in accordance with the requirements of AFI 32-7065.

This appendix is intended to provide the reader with an understanding of the proposed approach to resource management planning for the lands proposed to be withdrawn under Enhanced Training in Idaho (ETI) in compliance with 43 CFR 2310 3-2(b). To meet Air Force requirements, management planning would include the resources present on state school endowment lands leased from the State of Idaho for proposed training range sites, no-drop targets, and emitter sites.

II. PURPOSE

The purpose of the ETI Resource Management Plan and Implementation Program would be to further the Air Force's commitment to biodiversity conservation which sustains the natural environment required for realistic training in order to maintain military readiness. The plan is further intended to accomplish the following:

- ensure protection of natural and cultural resources
- reduce the effects of mission impacts on significant resources
- provide "good stewardship" of the proposed withdrawn lands
- provide a cost-effective management system

III. PROPOSED CONTENTS OF THE PLAN

The plan will be a comprehensive document consisting of a series of specific elements including:

- a Grazing Plan,
- a Natural Resource Management Plan,
- a Hazardous Waste Plan,
- a Cultural Resource Management Plan,
- a Fire Management Plan,

- a Recreation Plan, and
- if necessary to protect threatened and endangered species, a Conservation Plan.

The plan would integrate management strategies to address the full range of resource concerns from livestock grazing and cultural resources to hazardous waste and fire management as well as conservation strategies. In general, the plan would discuss pertinent laws, statutes, and AFIs, identify persons and agencies for consultation and coordination, and discuss regulatory requirements for each plan.

Proposed long-term resource studies may also be identified, as well as the effect of these studies on future management processes.

The plan's scope would be all withdrawn lands and leased State endowment lands associated with the selected alternative. Roads outside of these areas would not be within the scope of the Resource Management Plan, although public access to lands adjacent to the withdrawn areas would be addressed and applicable memorandums of agreement and understanding between the Air Force and other agencies will be discussed and referenced.

III. PLAN DEVELOPMENT SCHEDULE

A specific plan cannot be prepared for any alternative until a Record of Decision has been made. This constraint ensures that no preference for a particular alternative occurs. Therefore, the following plan development schedule presents a sequence of phases to allow appropriate progress on a plan without creating bias for decisionmakers.

Prior to a Record of Decision on the ETI environmental impact statement (EIS), a framework will be developed in consultation with the Bureau of Land Management (BLM), showing how resource issues will be addressed in the plan. This will include a discussion of the extent and commitment to address requirements ranging from applicable laws to areas of concern identified in the EIS.

Subsequent to a record of decision, site specific information from the environmental documentation will be incorporated into each element of the plan. Identified mitigation measures, any necessary implementation agreements or memorandums of understanding will be incorporated as management procedures.

Once the withdrawal is acted upon by Congress, appropriate amendments to the existing Mountain Home AFB Integrated Cultural and Natural Resource Management Plans (currently under preparation) would be made, thus ensuring consistent application of resource management processes.

APPENDIX N
AIRSPACE USE AND ENVIRONMENTAL EFFECTS:
1992 THROUGH THE PRESENT

AIRSPACE USE AND ENVIRONMENTAL EFFECTS: 1992 THROUGH THE PRESENT

INTRODUCTION

This appendix provides a further description of how the 366th Wing and other units have used the local airspace since the 1992 establishment of the composite wing at Mountain Home Air Force Base (AFB). The airspace discussed herein includes the restricted airspace associated with Saylor Creek Range (SCR) – R-3202; Military Operations Areas (MOAs) – Sheep Creek 1, 2, and 3, Bruneau 1 and 2, Saylor, Owyhee, Paradise, and Saddle A and B; and 13 associated Military Training Routes (MTRs). Other proposed configurations of the airspace are also described because of their relevance to how use of the local airspace has been presented and analyzed in environmental documentation.

This airspace has been used for military training for more than 50 years primarily by the units based at Mountain Home AFB, although other units and services have used and continue to use the local airspace. For the past two decades, the Idaho Air National Guard (IDANG) has conducted training regularly in the airspace, first with RF-4Cs, then transitioning to F-4Gs, and now with A-10s and C-130s. Other transient users from Air Force units or other services have also conducted training in the airspace for decades. The descriptions and discussion in this appendix account for all of these users, although the 366th remains the focus.

The information provided in this appendix demonstrates that overall airspace use since the establishment of the composite wing has remained below that projected and analyzed in the environmental impact statement (EIS) for *Proposals for the Air Force in Idaho* (Air Force 1992a). In turn, this decreased use means that the Air Force in Idaho EIS assessed a level of potential environmental consequences exceeding those resulting from actual use of the local airspace. Some of the important information presented in this appendix is as follows:

- (1) Sorties from Mountain Home AFB in the local airspace have been 50 percent fewer than analyzed in the Air Force in Idaho EIS.
- (2) Total sortie-operations in the local restricted airspace, MOAs, and MTRs are fewer than those assessed in the Air Force in Idaho EIS.
- (3) Approximately 1,600 more annual sortie-operations have occurred in the Owyhee MOA than projected in 1992. Elimination of as many as 3,200 annual sortie-operations on MTR routes over the Owyhee canyonlands in the same airspace has resulted in an overall reduced effect on the environment than those assessed in the Air Force in Idaho EIS. This reduced effect has been incorporated into the Enhanced Training in Idaho (ETI) EIS as part of the baseline for analysis.
- (4) Annual sortie-operations in all other local airspace units have remained below the levels projected and analyzed in the Air Force in Idaho EIS.

- (5) Actions influencing airspace use (i.e., B-1B relocation to Mountain Home AFB; conversion of the IDANG unit based at Gowen Field from F-4Gs to A-10s and C-130s) have been assessed and found to have no overall adverse direct, indirect, or cumulative impact on the local environmental resources.

PURPOSE

Public and agency comments received by the Air Force often request additional information on how past airspace use and associated training activities relate to current or proposed activities. Moreover, these comments ask for information on how those past activities affected the environment and how they relate to environmental conditions associated with current or proposed activities.

This appendix, which outlines how the airspace has been used since the establishment of the composite wing,

- presents the factors pertinent to describing airspace use, particularly with regard to characterizing specific aircraft operations with increasing precision.
- correlates the scope and findings of the associated environmental analysis to offer an understanding of environmental conditions under the airspace during the same period.
- provides a chronological description of the use of the local airspace since establishment of the composite wing, including changes in use and the rationale for those changes.

OVERALL FACTORS PERTINENT TO AIRSPACE USE AND ITS ENVIRONMENTAL EFFECTS

Airspace use and assessment of the environmental consequences of that use include both simple and highly complex elements. The simple part can be characterized as an aircraft taking off, flying in the airspace, and landing. The highly complex part of this characterization results from describing and quantifying in what segment of airspace the aircraft flies, how long it flies there, the altitudes it uses, how fast it flies, the types of maneuvers it performs, and how each of these elements potentially affect various environmental resources. Complexity increases when considering the activities of a variety of military aircraft with different missions and training requirements. Each of these variables is accounted for in this ETI EIS, and has been in past environmental analyses for actions of the 366th Wing and other users of the airspace.

However, it is necessary to recognize how these and other elements of airspace use are considered in these analyses in order to understand the relationship among past, present, and proposed airspace use and its associated environmental effects. The Air Force has emphasized presenting reasonable and precise characterizations of airspace use, whether past, present, or

proposed. Such airspace use data are the foundation for environmental analysis of noise conditions, air quality, flight safety, and airspace management, as well as the other resources potentially influenced by these activities. Since 1992, when the composite wing was established at Mountain Home AFB, three overall factors pertinent to characterizing airspace use and environmental conditions have improved or changed. These factors, as described below, affect both actual analysis of potential environmental impacts and the way in which the public and agencies perceive the potential for impacts.

Factor 1: Accounting for the Quantity of Airspace Use – Sorties and Sortie-Operations

A measure is required to accurately quantify the use of specific restricted areas, MOAs, and MTRs. In environmental documentation even before 1992, the Air Force has used the term "sortie" to describe the activity of a single aircraft in a particular unit of airspace (e.g., Paradise MOA). When an environmental document reported that B-1B aircraft would perform 349 annual "sorties" in R-3202 over SCR, it meant that B-1Bs were projected to enter the R-3202 airspace 349 times. Public and agency reviewers found this use of "sortie" to be confusing because the term "sortie" also has referred to the flight of a military aircraft from takeoff through landing. However, a single aircraft often uses more than one airspace unit during a single sortie. This means that one "sortie" from Mountain Home AFB would be counted as several "sorties" as it flies through different MOAs or MTRs.

This dual definition of "sortie" produced public and agency confusion and led the Air Force to use more precise terminology in environmental documentation. Therefore, the Air Force in this ETI EIS uses the term "sortie" to refer exclusively to the flight of a single aircraft from takeoff through landing, and "sortie-operation" to count aircraft activity in each airspace unit.

The use of "sortie" and "sortie-operation" clarifies for agencies and the public what is happening at the base and in the airspace. For example, past environmental documentation reported that the 366th Wing generated 9,000 "sorties" from Mountain Home AFB, but the sum of airspace "sorties" by the Wing in all local airspace units would exceed substantially the count of "sorties" from the base. Using "sortie-operation" to refer to activity in a unit of airspace avoids this confusion.

In addition, since sortie-operations are counted for each restricted area, MOA, and MTR, the shape and boundaries of the airspace units affect the total number of sortie-operations counted in each piece of airspace. In other words, by simply altering the internal boundaries and shape of the airspace, an aircraft could fly two identical sorties from Mountain Home AFB following an identical track over the ground, yet yield a different number of total sortie-operations. Figures N-1 through N-6 illustrate two identical sorties flown through existing and a variety of proposed airspace configurations, including the following:

- **Pre-1992 Airspace Configuration** – This configuration, defined in large part for F-111 aircraft training, represents the airspace still depicted on FAA aeronautical charts in 1997 (Figure N-1).

- 1992 Proposed Airspace Configuration — As presented in the *EIS for Proposals for the Air Force in Idaho*, this configuration modified the internal horizontal boundaries of the Owyhee MOA and Sheep Creek 3 MOA, consolidated the six MOAs associated with SCR into a single MOA, raised the upper limits of all MOAs to a uniform 18,000 feet mean sea level (MSL), and replaced that portion of the Paradise MOA over Idaho with an upward extension (to 18,000 feet MSL) of the Owyhee MOA. Although pursued by the Air Force in the Record of Decision (ROD) for the EIS, the Federal Aviation Administration (FAA) has yet to implement these airspace modifications (Figure N-2).
- 1992 to Present Airspace Configuration — Since the FAA has not implemented the proposed airspace modifications analyzed in the 1992 EIS, the airspace configuration remains the same as in 1991 and before. This is the baseline configuration presented in the ETI EIS (Figure N-3).
- Proposed Airspace Configuration for ETI Alternative B — As presented in the body of the ETI EIS, Alternative B would involve a set of airspace modifications (Figure N-4).
- Proposed Airspace Configuration for ETI Alternative C — As presented in the body of the ETI EIS, Alternative C would involve a similar set of airspace modifications as in Alternative B, but with a greater expansion of the proposed Jarbidge MOA and a commensurate reduction of the Owyhee MOA (Figure N-5).
- Proposed Airspace Configuration for ETI Alternative D — As presented in the body of the ETI EIS, Alternative D would involve the same set of airspace modifications as in Alternative B, with the addition of two miles of MOA airspace on the eastern edge of the Jarbidge MOA (Figure N-6).

On each airspace configuration, an identical set of two sorties is depicted to compare the effect of airspace boundaries on counting sortie-operations. Each sortie represents a typical training flight, but does not account for the full range of sorties that are flown or for all types of training activities. The following outlines the basic components of these sorties.

- Sortie #1

Depart Mountain Home AFB

Transit to MOAs in Idaho

Train in MOAs between 4,000 and 12,000 feet above ground level (AGL)

Exit MOAs and transit to Mountain Home AFB

Land at Mountain Home AFB

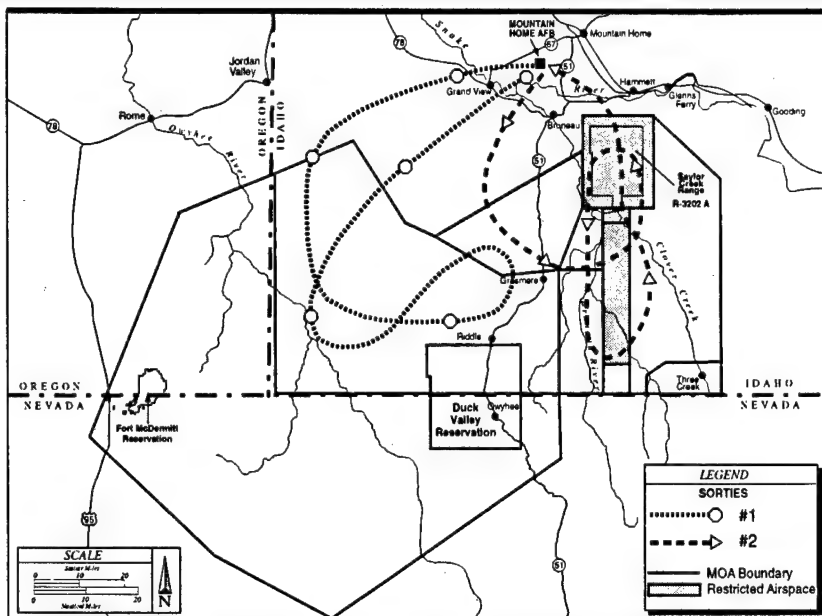


Figure N-1

Pre-1992 Military Training Airspace
and Representative Sorties

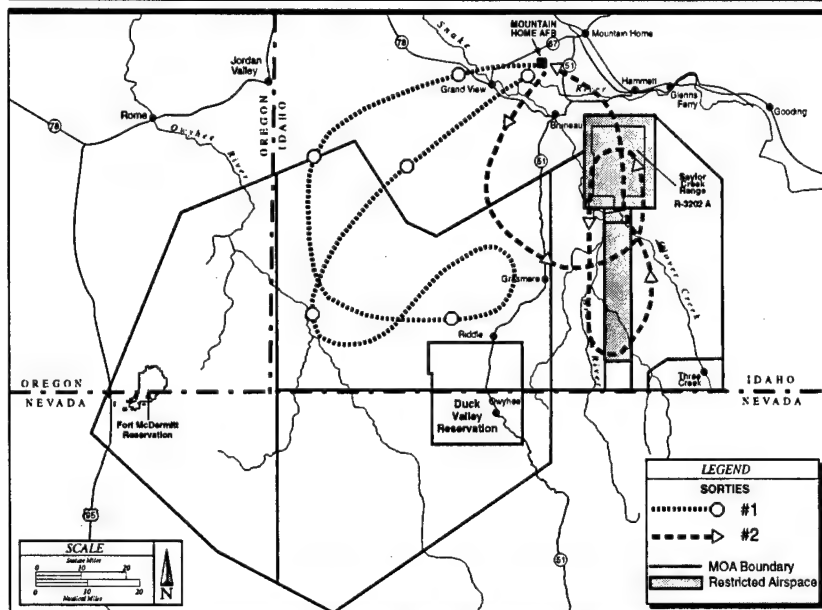


Figure N-2

Military Training Airspace
Defined in Record of Decision
for Air Force in Idaho EIS (1992)
and Representative Sorties

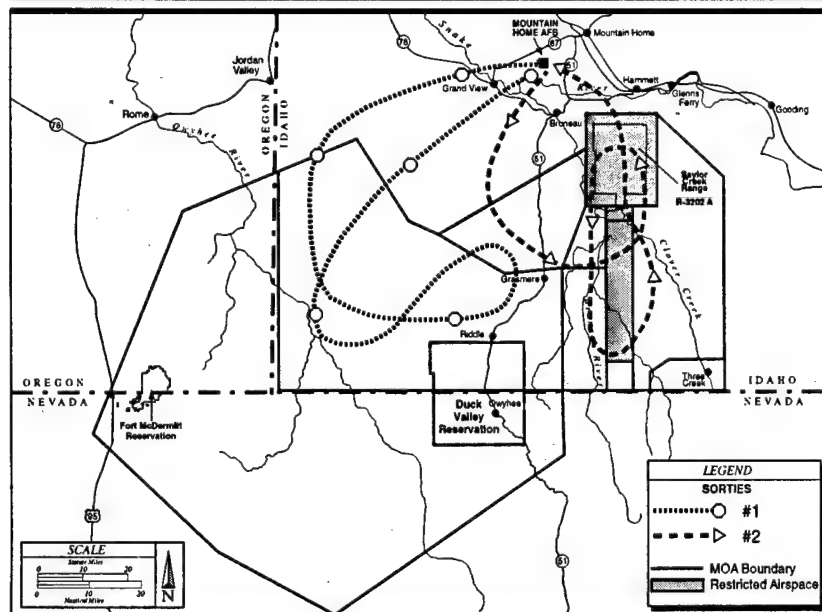


Figure N-3

1992-Present (Baseline) Military Training
Airspace and Representative Sorties

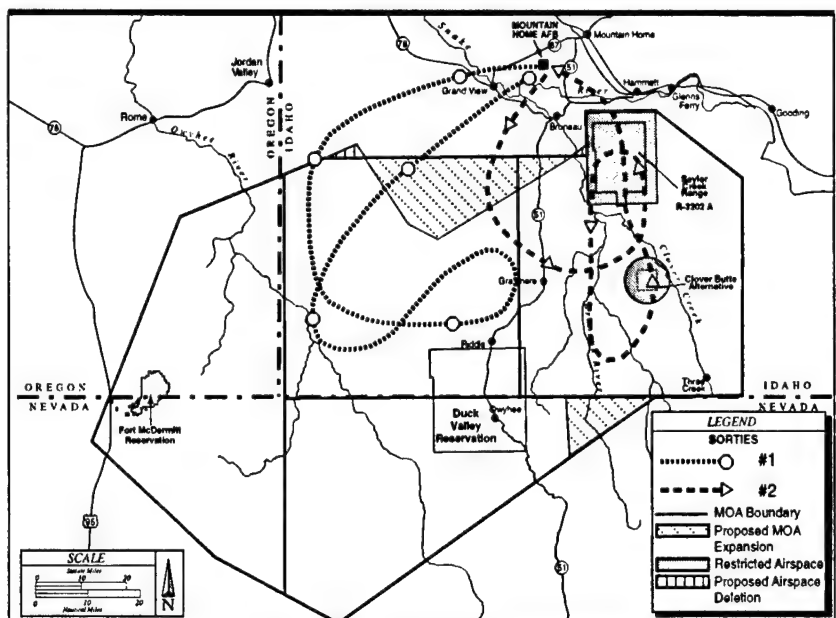


Figure N-4

**Alternative B - Clover Butte
Proposed Military Training
and Representative Sorties**

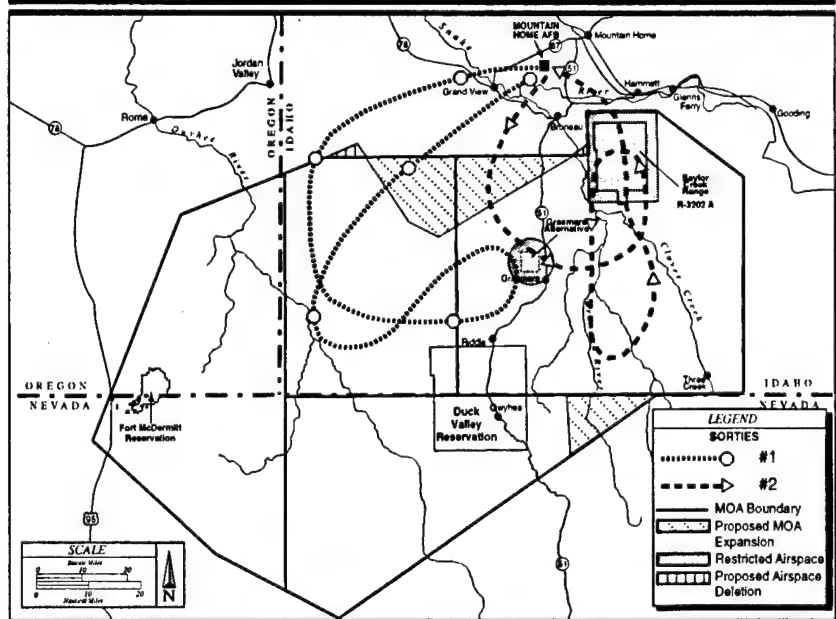


Figure N-5

**Alternative C - Grasmere
Proposed Military Training
and Representative Sorties**

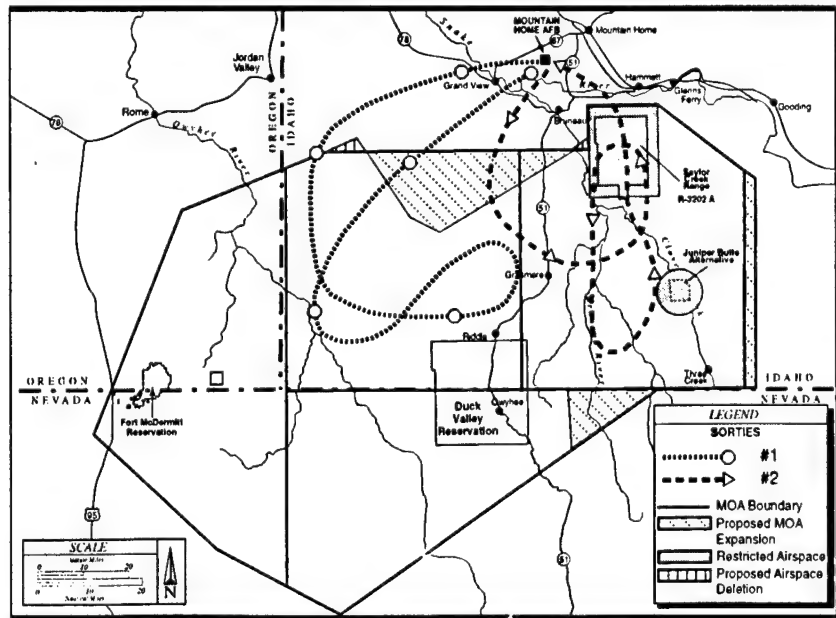


Figure N-6

**Alternative D - Juniper Butte
Proposed Military Training
and Representative Sorties**

- Sortie #2

Depart Mountain Home AFB

Transit to and train in MOAs associated with SCR and R-3202A

Exit R-3202A and transit to Mountain Home

Land at Mountain Home AFB

By overlaying each sortie onto the different airspace configurations, then counting the number of sortie-operations associated with each airspace unit, different totals of sortie-operations result despite identical tracks over the ground. As these diagrams demonstrate, the number of sortie-operations for each airspace unit depends entirely upon the airspace configuration. For example, under the existing airspace structure, Sortie #1 would yield a total of three sortie-operations: one for training in the Owyhee MOA with upper limits of approximately 10,000 feet AGL; one for training in the MOAs associated with SCR because flight extended into the Sheep Creek 3 MOA; and one for training in the Paradise MOA which overlies the Owyhee MOA in Idaho from about 10,000 to 13,500 feet AGL. In contrast, under the proposed airspace configuration presented in the Air Force in Idaho EIS, this same sortie would have yielded only one sortie-operation since all the airspace used by the aircraft would have been designated the Owyhee MOA.

Such differences in total sortie-operations also apply for Sortie #2. Under the airspace modifications analyzed in the Air Force in Idaho EIS and issued as part of the ROD, sortie #2 would account for a total of three sortie-operations; under the current airspace configuration, only two sortie-operations would be tallied even though it flies the same track over the ground. Due to this variability and the essentially random nature of flight activity in the MOAs, using total (for all airspace units) sortie-operations as the measure of comparing proposed (with airspace changes) to actual (without airspace changes) conditions would not yield precise results. Similarly, direct comparison of total sortie-operations in a specific airspace unit to sortie-operations in the same but reconfigured airspace unit requires recognition of the effects of the airspace structure on counts of sortie-operations. For example, when the composite wing was established, the Air Force projected and analyzed approximately 5,800 sortie-operations in the Owyhee MOA annually. Under the current baseline, as analyzed in two previous environmental assessments (Air Force 1996; NGB 1996), airspace use of the Owyhee MOA totaled about 7,400 sortie-operations per year. Part of the difference results from variations in counting sortie-operations between the proposed airspace modification associated with the 1992 projections and the existing unmodified airspace structure.

Baseline flight activities defining the same track over the ground as sortie-operations projected in the 1992 EIS, would be counted as additional sortie-operations in the unmodified airspace and in the ETI EIS alternatives. Although the Air Force cannot provide a specific flight track for sortie-operations, the effect of different airspace configurations on counts of sortie-operations, in part, suggests that total current activities in the local restricted airspace and MOAs do not exceed those projected and analyzed in the Air Force in Idaho EIS.

Sorties from Mountain Home AFB that fly in the local airspace provide a measure of overall airspace use unaffected by differences in airspace configurations. Figure N-7 presents data on the total number of annual sorties generated from Mountain Home AFB between 1989 and the present, as well as projected sorties in the ETI EIS. The number of sorties proposed for the composite wing when it was established and fully analyzed in the 1992 Air Force in Idaho EIS provides a comparative measure for the actual and projected levels of sorties. As these data reflect, the projected 21,000 sorties assessed in 1992 substantially exceed the actual (up to 10,800) annual sorties experienced since that time.

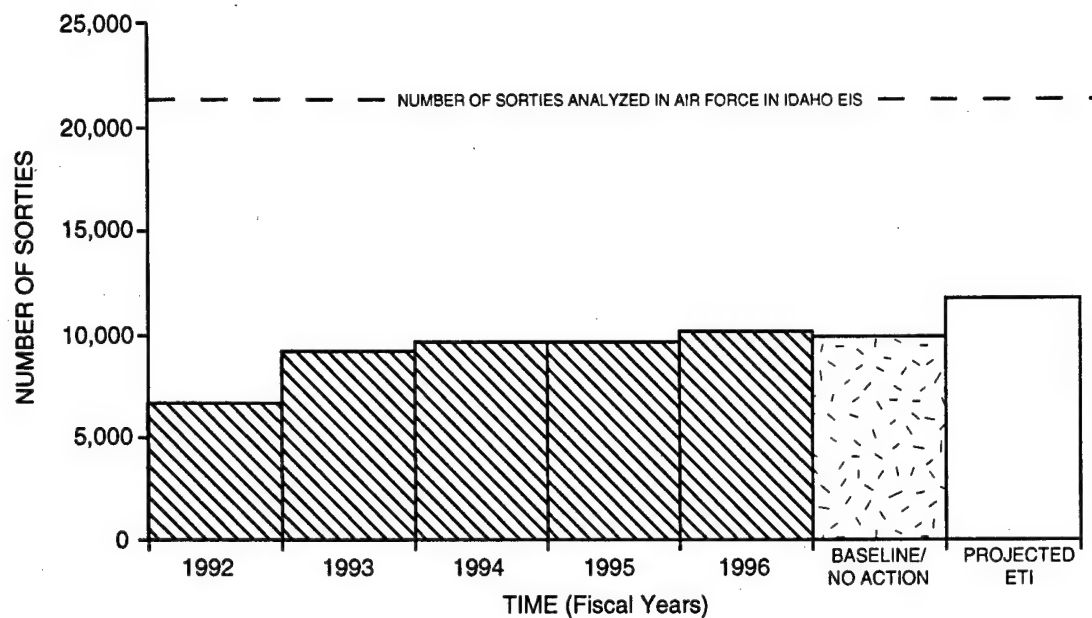
Sorties from Mountain Home AFB represent a consistent year-to-year measure of overall activity that could or does occur in the local airspace. Environmental analysis for a particular number of sorties should generally account for the range of environmental effects of a lesser number of sorties performed by a similar mix of aircraft types conducting the same training activities. While differences in the uses of altitudes (i.e., increasing use of higher altitudes in recent years) and in the aircraft inventory (i.e., replacement of B-52s with B-1Bs; replacement of F-4Gs with A-10s and C-130s) have occurred, these changes do not materially affect the overall conclusion that the 1992 Air Force in Idaho EIS analyzed more sorties, with greater potential impacts, generated from Mountain Home AFB than actually have occurred since then, or are projected to occur in the ETI EIS should a training range alternative be selected.

As shown in Figure N-7, the period in which the establishment of the composite wing was completed (1992 through 1994) corresponded to an initial increase in sorties in 1992, followed by a stabilization from 1993 through 1995. A slight increase (about 500 sorties) occurred in 1996, associated with the relocation of six B-1B aircraft to Mountain Home. Under ETI, sorties from the base in local airspace would increase by about 1,000 per year due to the enhanced training opportunities in Idaho and the commensurate reduction in sorties at remote ranges. This number of annual sorties would remain well below (approximately 10,000 fewer) the number analyzed in the 1992 Air Force in Idaho EIS.

No increase in the hours flown per sortie occurred between the period from 1992 to 1996. Thus, given an average of 0.8 hour per sortie, the Air Force in Idaho EIS assessed an operational situation in which more than 16,000 hours would be flown in the local airspace. Actual sorties from Mountain Home resulted in approximately half as many hours of flight in the local airspace. This difference between analyzed and actual indicates that the areas under local airspace have been exposed to approximately 50 percent fewer overflights and less noise than analyzed in the Air Force in Idaho EIS.

Factor 2: Increased Precision in Defining Training Requirements and the Operational Characteristics of Sortie-Operations

As with any analytical endeavor, describing airspace use to support analysis of its potential effects on the environment has become more precise over time. In 1992, when projections for



MAJOR EVENTS

FY 1992

- Air Force in Idaho EIS ROD
- 389/391 Fighter Squadron Activated
- 34 Bomber Squadron Activated at Castle AFB

FY 1993

- 22 ARS/390 Activated
- F-111 Drawdown Complete

FY 1994

- 34 Bomber Squadron Transferred to Ellsworth AFB

FY 1995

- FONSI for Relocation of 34BS to Mountain Home, AFB
- FONSI for 124 Wing Conversion
- 34 Bomber Squadron Beddown at Mountain Home, AFB
- 124 Wing Conversion Begun

Figure N-7 Sorties Flown from Mountain Home AFB to Local Airspace

local airspace use were made for the composite wing, the Air Force lacked a peace-time model upon which to base the precise amount and nature of training that a composite wing would conduct in the local airspace. Therefore, the Air Force estimated training activity based on available data from both actual combat situations and specific training requirements for individual assigned aircraft. This estimate of annual training requirements assumed that Mountain Home-based aircraft would spend the year based at Mountain Home AFB and use local airspace for air-to-air and continuation training. Experience with world-wide contingency responses has resulted in continuing variations (i.e., decreases) in local airspace usage.

Operational characteristics are projected that include numbers of sortie-operations per airspace unit per aircraft, the duration of the sortie-operation in each airspace unit, the proportion of that duration spent by each aircraft type in various altitude blocks, and the speed and power setting for the aircraft in that airspace unit. Because training a peace-time composite wing represented a new concept without an appropriate precedent, the Air Force made the best estimates or projections of all of the operational characteristics used in the 1992 analysis. Since 1992, improvements have been made in both the documentation of operational characteristics and the extent of training required for individual aircrews and a composite wing. While the 1992 projected operational characteristics were generally accurate for the time, but they were not supported by as much detail as operational data used today. The following examples illustrate this.

1. Tactics for defeating enemy defenses and ensuring aircrew survival have evolved from 1992 to the present. Specifically, less time is now spent in the target area, and emphasis has shifted from low-altitude to higher-altitude ingress to targets and ordnance delivery. Training being conducted at generally higher altitudes, when accompanied by shorter sortie durations, tends to reduce both noise levels and the potential for on-the-ground exposure to overflights. Prior to the establishment of the composite wing, the average sortie for an F-111 aircraft stationed at Mountain Home AFB lasted 1.6 to 1.8 hours. Furthermore, these sorties were predominately flown below 500 feet AGL. Composite wing projections analyzed in the Air Force in Idaho EIS included sortie durations averaging less than an hour. Due to the type of training projected to be conducted in the Owyhee MOA, those sortie-operations were predominately programmed to occur at 1,000 feet AGL or less.

The Air Force in Idaho EIS assessed about 5,750 annual sortie-operations; baseline sortie-operations used in this ETI EIS totaled approximately 7,350. Although current sortie-operations in the Owyhee MOA total 1,600 more than predicted in the Air Force in Idaho EIS, this difference is unlikely to have increased noise (Table N-1). If it is assumed that all additional 1,600 sortie-operations were conducted in the same relative manner as the 5,750 sortie-operations assessed in the Air Force in Idaho EIS, only a 1 decibel (dB) increase in noise would result. However, the evolution to shorter cumulative flight times (0.8 hour vs. 1.8 hours) and higher altitudes (above 2,000 feet AGL) continued after the establishment of the composite wing through the 1996 relocation of the B-1B aircraft to Mountain Home AFB. Both of these factors

**Table N-1. Owyhee MOA: Chronology of Airspace Use,
Noise Levels and Chaff and Flare Use**

Year(s)	Data Source	Annual Sortie-Operations Owyhee MOA	Altitude Use Pattern	Sortie-Operations MTRs through MOA	Noise Levels MOA/MTRs	Chaff Use ¹ All Airspace/Owyhee MOA	Flare Use ¹ All Airspace/Owyhee MOA
1992	Air Force in Idaho EIS; Projected and Analyzed	5,746	>35% above 2,000 feet AGL (estimated)	3,944	55 L _{dn} / 59-60 L _{dn}	100,000 bundles/NA ²	50,000 flares/NA Minimum release altitude of 400 feet AGL
1993- 1994	Idaho Training Range EIS; Baseline conditions	7,375	>50% above 2,000 feet AGL	0 ³	54 L _{dn} /0 ⁴	67,000 bundles/NA	38,000 flares/NA Minimum release altitude of 2,000 feet AGL
1995- 1996	ETI Baseline/ No-Action Alternative	7,350	>70% above 2,000 feet AGL	0	53-63 L _{dn} /0 ⁵	49,000 bundles/ 12,100 bundles	25,000 flares/6,100 flares Minimum release altitude of 2,000 feet AGL
—	Proposed ETI Projected for Alternatives B, C, or D	7,846	>85% above 2,000 feet AGL	0	43-59 L _{dn} /0 ⁵	55,000 bundles/ 15,800 bundles	20,900 flares/5,700 flares Minimum release altitude of 2,000 feet AGL

Notes: 1. All quantities rounded.

2. NA = Not available; use not calculated by individual MOAs at that time.

3. During preparation of the ITR EIS, the Air Force and IDANG eliminated the segments of VR-1301 and VR-1302 that crossed the Owyhee MOA.

4. Noise levels defined with improved, more precise flight parameters relative to Air Force in Idaho EIS.

5. Noise levels defined with improved, more precise flight parameters relative to ITR DEIS and the capability, where applicable, to present variations in noise levels within a single airspace unit.

reduce the effect of the additional sortie-operations and eliminate the possibility of a 1 dB increase in noise. Moreover, the proposed alternatives for range development and airspace utilization in the ETI EIS reflect an even greater emphasis on shorter duration sortie-operations in individual airspace units and greater proportional use of altitudes above 5,000 feet AGL.

2. In 1992, only three altitude blocks (500 to 1,000 feet AGL, 1,001 to 10,000 feet AGL, and 10,001 feet AGL or greater) were used to describe sortie-operations conducted by specific aircraft in an airspace unit. In contrast, while the same range of flight altitudes are considered, more current analyses have been based on five altitude bands (500 to 1,000 feet AGL, 1,001 to 2,000 feet AGL, 2,001 to 5,000 feet AGL, 5,001 to 10,000 feet AGL, and 10,001 feet AGL or greater). These additional bands allow for a more realistic representation of sortie operations, afford increased precision for the environmental models used to support analyses, and produce data more closely reflecting what is occurring.
3. In 1992, a great deal of training emphasis was placed on developing a pilot's ability to perform many functions while flying the aircraft at low altitudes. MTRs served as a prime airspace resource to support this low-altitude training. When the composite wing was established at Mountain Home AFB, 16,294 MTR sortie-operations were projected. However, the reduced emphasis on the need for low-altitude flight reduced the need for these sortie-operations. As training requirements changed, aircrews were able to complete the reduced low-altitude flight requirements while conducting sortie-operations in MOAs. As a result, actual MTR utilization in the region has decreased to 2,184 sortie-operations. This represents an approximate 87 percent reduction in low-level MTR utilization from that projected.
4. Training operational changes have affected not only airspace use. Projections for chaff use analyzed in the 1992 EIS projected a total of up to 100,000 bundles of chaff per year throughout the MOAs and over SCR. Once the composite wing was established, actual total use of chaff in all of the local airspace has been less than 50,000. Similarly, the 1992 EIS analyzed the use of about 25,000 flares annually in the airspace and actual use has remained well below these levels.
5. For the environmental analysis regarding the establishment of a composite wing, the Air Force estimated that approximately 950 training events that could result in supersonic flight would occur annually. With further evolution of the training activities, as well as replacement of the IDANG's F-4Gs with A-10s and C-130s, these training events remained well below the projected and analyzed number. For example, under Baseline/No-Action conditions, an estimated 537 annual sortie-operations occur that could result in a supersonic event.

The implications of the increased precision in defining training requirements and operational characteristics of sortie-operations since 1992 are especially useful for environmental analysis. While the 1992 Air Force in Idaho EIS provided a reasonable, accurate, and defensible analysis

based upon the information and methodologies available, subsequent improvements in defining training and operational characteristics are providing the public, agencies, and decisionmakers with more precise analysis and findings and are in direct response to public and agency requests for more precise information. The general results of the 1992 environmental analysis, such as the effects of sorties from Mountain Home AFB, can be correlated with the effects of sorties in subsequent environmental documents. In contrast, the sortie-operations of the 1992 Air Force in Idaho EIS and earlier environmental analysis does not correlate with the data on the more precise sorties and sortie-operations provided in the ETI EIS.

Factor 3: Improved Precision in Noise Modeling

The operational characteristics described above, often termed "flight parameters," represent important input to modeling aircraft noise. In turn, aircraft noise analysis provides a basis for assessment of all other resources potentially affected by noise (e.g., recreation, Native American ceremonies). Like the flight parameters, noise modeling has improved since 1992, offering greater precision in reporting noise levels generated by military and other aircraft. Two primary changes have occurred:

- 1) Actual measurements of engine noise levels generated by each specific aircraft type have been consistently upgraded to provide more precise input to noise models.
- 2) Computer modeling programs for noise analysis have improved, offering greater precision in identifying noise levels and accepting the more precise flight parameters.

Due to such improvements, noise levels defined for the local airspace in 1992 cannot be correlated to those presented in more recent analyses. This does not mean that the 1992 results are invalid; rather, it demonstrates that the more recent analyses provide the public, agencies, and decisionmakers with more precise data than were available in 1992.

Noise modeling and comparative analysis of alternatives still rely on the same noise metrics, although the precision of the input has improved. For a further discussion of noise analysis methodology, refer to section 4.2 and appendix K.

CHRONOLOGY OF AIRSPACE USE

The factors described above represent significant aspects of the context of airspace use and environmental conditions from 1992 to the present. While Factor #1 influences quantification of that use, Factors #2 and #3 influence analysis of the environmental consequences of the use. In the outline of the chronology of airspace use and environmental documentation presented in Table N-2, the influence of these factors is evident.

Table N-2 presents the chronology of airspace use and the relevant scope of analysis for environmental documentation.

Table N-2. Changes and Evolution of Airspace Use
(Page 1 of 5)

<i>Date</i>	<i>Situation</i>	<i>Change or Evolution in Airspace Use</i>	<i>Remarks</i>
1989	SAC ¹ use of SCR for B-52s, B-1B, and FB-111.	Approved SCR and associated MOAs for 2,080 annual sortie-operations for B-1B, B-52, FB-111, in addition to existing use.	EA and FONSI ² for SAC use of SCR and associated MOAs (SAC 1989). Analysis examined effects of all airspace users on SCR and in associated MOAs; no significant increase in noise levels was defined.
1992	Establishment of a composite wing at Mountain Home AFB.	Projected approximately 27,000 total sortie-operations ³ in proposed modified local airspace; also about 3,900 projected sortie-operations for two low-altitude (100 feet AGL) MTRs over the Owyhee canyonlands; approximately 21,000 sorties projected from Mountain Home AFB.	EIS for <i>Proposals in the Air Force in Idaho</i> and Record of Decision (Air Force 1992). Analysis examined effects of all airspace users in projected modified airspace; additive effects of MOA and MTR sortie-operations assessed. EA and FONSI for SAC use of SCR and associated MOAs (SAC 1989).
1992	34th Bomb Squadron, located at Castle AFB, California and consisting of seven B-52 aircraft, designated as part of the 366th (composite) Wing.	34th Bomb Squadron trains with the wing in local airspace flying approximately 640 sortie-operations.	EIS for <i>Proposals in the Air Force in Idaho</i> and Record of Decision. All airspace use by these B-52s assessed in this EIS.

- Notes:
1. SAC = Strategic Air Command
 2. FONSI = Finding of No Significant Impact
 3. Identified as "sorties" in the Air Force in Idaho EIS, but counted as sortie-operations as defined in this EIS.

Table N-2. Changes and Evolution of Airspace Use
(Page 2 of 5)

<i>Date</i>	<i>Situation</i>	<i>Change or Evolution in Airspace Use</i>	<i>Remarks</i>
1992-1993	FAA fails to modify airspace as proposed in Air Force in Idaho EIS; 366th Wing and IDANG continue to train; training activities reflect evolution of composite wing tactics and mission including reduced low-altitude training requirements and sortie-duration.	366th Wing and IDANG adjust airspace use to existing, unmodified local airspace; adjustments include periodic temporary altitude reservations above the MOAs associated with SCR; sortie-operations in the existing unmodified local airspace total approximately 24,000, or 3,000 fewer sortie-operations than projected in 1992; about 3,200 sortie-operations on MTRs over the Owyhee canyonlands; sorties from Mountain Home AFB total about 11,000 (or 10,000 fewer than projected in 1992); sortie-operations on local MTRs remain more than 80 percent below projections in 1992.	EIS for <i>Proposals for Air Force in Idaho</i> and ROD/EIS evaluated distribution of sortie-operations in modified MOAs and restricted airspace; even with adjusted unmodified airspace use, EIS analysis covers the effects of the number of sortie-operations per airspace unit for SCR and associated MOAs and Paradise MOA; however, sortie-operations in Owyhee MOA about 1,600 more than analyzed in Air Force in Idaho EIS.
1992	B-1B aircraft authorized to fly in the Owyhee MOA.	B-1B projected annual sortie-operations in Owyhee MOA total 80.	Categorical Exclusion based on continuation of a similar activity assesses proposed use and finds no adverse change.

Table N-2. Changes and Evolution of Airspace Use
(Page 3 of 5)

<i>Date</i>	<i>Situation</i>	<i>Change or Evolution in Airspace Use</i>	<i>Remarks</i>
1993	Air Force proposes ITR and associated airspace modifications.	Assessed 24,000 baseline sortie-operations, 3,000 fewer than projected in 1992 Air Force in Idaho EIS; projected greater percentage of use in Owyhee MOA and ITR, but reductions in MOAs associated with SCR; proposed airspace modifications differ from Air Force in Idaho EIS proposed modifications; proposed sortie-operations duration reduced an average 30 minutes; projected increased proportional use of altitudes above 2,000 ft in Owyhee MOA.	ITR DEIS (Air Force 1993). Analysis accounted for effects of proposed use of airspace, including reconfigured MOAs and proposed restricted areas; changes in airspace configuration and use of altitude blocks make direct comparison to 1992 projections difficult.
1993	Elimination of segments of low altitude MTRs across Owyhee MOA.	Approximately 3,200 low altitude sortie-operations eliminated on MTRs over the Owyhee canyonlands	Elimination of sortie-operations expected to reduce total noise and other effects over the Owyhee canyonlands.
1994-1996	366th Wing voluntarily restricts overflights below 15,000 feet AGL over the Duck Valley Reservation and voluntarily restricts chaff and flare use and supersonic flight over the reservation; formalized in agreement in 1996; all flight activity below 10,000 feet AGL over the Reservation prohibited.	No change in the number of sortie-operations, but restrictions create an effective "no-fly" zone over the reservation in portions of the Owyhee and Paradise MOAs.	Although some flight training shifted north there was no change in the number of sortie-operations in the MOA or use of altitude blocks.

Table N-2. Changes and Evolution of Airspace Use
(Page 4 of 5)

<i>Date</i>	<i>Situation</i>	<i>Change or Evolution in Airspace Use</i>	<i>Remarks</i>
1994	34th Bomb Squadron moved to Ellsworth AFB and converted from B-52s to B-1B aircraft; continues training as part of 366th Wing.	B-1B aircraft train as part of 366th Wing; total sortie-operations for B-1Bs consistent with past, previously analyzed conditions.	EA and FONSI for B-1B Temporary Relocation to Ellsworth AFB (Air Force 1994). Other previous environmental documentation covered B-1B projected sortie-operations in local airspace.
1995	366th Wing completes beddown and mission evolves from air interdiction to air expeditionary.	Sortie-operations in the existing local airspace total approximately 22,000, or 5,000 fewer sortie-operations than projected in 1992; sorties from Mountain Home AFB total about 12,000, or 9,000 fewer than projected in Air Force in Idaho EIS 1992; tactics continue to cause shift to proportionately greater use of higher altitudes and less use of lower altitudes.	Even though the mission changed and the airspace remained unmodified, the Air Force in Idaho EIS analysis covers the effects of the number of sortie-operations per airspace unit for SCR and associated MOAs and Paradise MOA; sortie-operations in Owyhee MOA about 1,600 more than analyzed in Air Force in Idaho EIS.
1996	34th Bomb Squadron, with six B-1B primary assigned aircraft, moved to Mountain Home AFB.	Total sortie-operations in existing unmodified airspace increase by 0.9 percent (228); annual sortie-operations in SCR and Owyhee MOA increase by 2.6 (180) and 0.2 (12) percent, respectively.	EA and FONSI for Proposed Relocation of 34th Bomb Squadron to Mountain Home AFB (Air Force 1996a). All airspace use analyzed for B-1B and all other users; very little change to noise conditions or other environmental effects; cumulative effects assessed in relation to proposed ETI and IDANG conversion.

Table N-2. Changes and Evolution of Airspace Use
(Page 5 of 5)

<i>Date</i>	<i>Situation</i>	<i>Change or Evolution in Airspace Use</i>	<i>Remarks</i>
1996	IDANG converts from 24 F-4G aircraft to 15 A-10 and four C-130 primary assigned aircraft	Total sortie-operations in existing airspace decrease by 1,484; sortie-operations at SCR increase by 8 percent, but decrease by 4 percent and 23 percent in Owyhee and Paradise MOAs respectively	EA and FONSI for Proposed Aircraft Conversion for the 124th Wing (NGB 1996a). All airspace use analyzed for A-10s and C-130s and all other users; noise levels at SCR and Owyhee MOA decrease because A-10s and C-130s much quieter than F-4Gs; cumulative affects analyzed in relation to proposed ETI and B-1B relocation.
1997	IDANG moves segment of a MTR corridor to avoid continued overflight of the Duck Valley Reservation.	No change to airspace use.	EA for Realignment of MTR Segments (NGB 1997). Analysis focused on MTR segments in Nevada.

Several concepts are important to understanding the implications of the chronology:

1. The EIS for *Proposal for the Air Force in Idaho*, which analyzed the establishment of the composite wing at Mountain Home AFB and its use of the airspace, projected and analyzed more sortie-operations (11 to 19 percent) in the local airspace and more sorties from Mountain Home AFB (51 to 67 percent) than have actually occurred.

All projections of sortie-operations presented in 1992 were predicated on an airspace structure never implemented by the FAA. The 366th Wing and other users of the airspace adapted to the existing, unmodified configuration. Adaptation involved redistributing sortie-operations among the MOAs and restricted airspace as compared to 1992 projections. These differences in sortie-operations per airspace unit result, in part, from the effects of counting sortie-operations in two different airspace configurations. The primary factors accounting for these differences include more than an 80 percent less use of low-altitude MTRs than projected, a shift of about 10 percent of the low-altitude training projected for MTRs to MOAs, and evolution of the sophistication and complexity of composite wing training.

2. Evolution of airspace use since 1992 has included redistribution of sortie-operations within the airspace units, a continuing trend toward reduced cumulative time for sortie-operations at lower altitude, and reduced duration for sortie-operations at all altitudes, particularly when compared to pre-1992 activities.
3. National Environmental Policy Act analysis performed for the B-1B relocation and the IDANG's conversion to A-10s and C-130s in 1996 assessed all airspace use, including sortie-operations as redistributed in MOAs and restricted airspace. Additional sortie-operations by B-1Bs accounted for a 0.9 percent increase in the local airspace and resulted in no changes to noise conditions or adverse impacts to other resources. Replacement of the F-4Gs with A-10s and C-130s reduced total sortie-operations in the local airspace by 5 percent (including additional B-1B sortie-operations); noise levels in either decrease minimally or remain unchanged. Taken as a whole, these actions have resulted in no adverse impacts.
4. Segments of two MTRs that crossed the Owyhee MOA were eliminated in 1993, resulting in a reduction of 3,200 annual low-altitude sortie-operations through the MOA airspace over the Owyhee canyonlands. These changes reduced overflights and associated noise over the Owyhee Canyon.

LIST OF ACRONYMS AND ABBREVIATIONS

AAA	Anti-Aircraft Artillery	DEQ	Division of Environmental Quality
AAMRL	Armstrong Aerospace Medical Research Laboratory	DNL	Day-Night Average Sound Level
ACC	Air Combat Command	DoD	Department of Defense
ACCI	Air Combat Command Instruction	DODI	Department of Defense Instruction
ACEC	Area of Critical Environmental Concern	DOI	Department of the Interior
ACHP	Advisory Council on Historic Preservation	DOT	Department of Transportation
ACM	Air Combat Maneuver	DRMO	Defense Reutilization and Marketing Office
AEF	Air Expeditionary Force	DRMS	Defense Reuse Management System
AESO	Aircraft Environmental Support Office	EA	Environmental Assessment
AFB	Air Force Base	EBS	Environmental Baseline Survey
AFI	Air Force Instruction	EC	Electronic Combat
AFP	Air Force Pamphlet	EDR	Environmental Data Resources, Inc.
AFOSH	Air Force Occupational Safety and Health	EED	Electroexplosive Devices
AFR	Air Force Regulation	EIAP	Environmental Impact Analysis Process
AGL	Above Ground Level	EIS	Environmental Impact Statement
AIRFA	American Indian Religious Freedom Act	E.O.	Executive Order
ANG	Air National Guard	EOD	explosive ordnance disposal
AQCR	Air Quality Control Region	EPCRA	Emergency Planning and Community Right-to-Know Act
ARPA	Archaeological Resources Protection Act	ESA	Endangered Species Act
ARTCC	Air Route Traffic Control Center	ESII	Envirosafe Services of Idaho
AST	Aboveground Storage Tank	ETI	Enhanced Training in Idaho
ATC	Air Traffic Control	EUA	Exclusive Use Area
ATCAA	Air Traffic Control Assigned Airspace	F	Fahrenheit
AUM	Animal Unit Month	FAA	Federal Aviation Administration
AWACS	Airborne Warning and Control System	FEBA	Forward Edge of Battle Area
BAM	Bird Avoidance Model	FEIS	Final Environmental Impact Statement
BASH	Bird-Aircraft Strike Hazard	FEMA	Federal Emergency Management Agency
BBS	Breeding Bird Survey	FFCA	Federal Facilities Compliance Act
BDU	Bomb Dummy Unit	FICON	Federal Interagency Committee on Noise
BHB	Bruncan-Hardtrigger-Buncelvoir	FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
BIA	Bureau of Indian Affairs	FIP	Federal Implementation Plan
BLM	Bureau of Land Management	FIS	Flood Insurance Study
BOR	Bureau of Reclamation	FLPMA	Federal Land Policy and Management Act
BP	Babbington-Piline	FMZ	Fire Management Zone
BSU	Boise State University	FONSI	Finding of No Significant Impact
CAA	Clean Air Act	FTRC	Fallon Training Range Complex
CaO	calcium oxide	FY	Fiscal Year
cc	cubic centimeters	GAP	Gap Analysis Project
CCD	Census County Division	GCI	Ground Control Intercept
CDNL	C-Weighted Day-Night Average Sound Level	GIS	Geographic Information System
CDP	Census Designated Place	GYE	Greater Yellowstone Ecosystem
CEQ	Council on Environmental Quality	HAP	High Accident Potential
CERCLA	Comprehensive Environmental Response Compensations and Liability Act	HASP	Health and Safety Plan
CERFA	Comprehensive Environmental Response Facilitation Act	HAZMAT	Hazardous Materials
CFR	Code of Federal Regulations	HMA	Herd Management Area
CO	carbon monoxide	HSV	Hardtrigger-Snowmore-Vickery
CT	Continuation Training	ICDC	Idaho Conservation Data Center
CWA	Clean Water Act	IDANG	Idaho Air National Guard
CWT	Composite Wing Training	IDARNG	Idaho Army National Guard
dB	Decibels	IDFG	Idaho Department of Fish and Game
dB(A)	decibel (A-weighted)	IDHW	Idaho Department of Health and Welfare
dB(C)	CDNL in units of decibels	IDWR	Idaho Department of Water Resources
DEIS	Draft Environmental Impact Statement	IDL	Idaho Department of Lands
		IFR	Instrument Flight Rules

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

IMACS	Intermountain Antiquities Computer Survey	POU	Place of Use
IMP	Interim Management Policy	ppb	parts per billion
INPS	Idaho Native Plant Society	ppm	parts per million
IR	Instrument Route	PSD	Prevention of Significant Deterioration
IRA	Indian Reorganization Act	psf	per square foot
ISHS	Idaho State Historical Society	RANS	Range Squadron
ITD	Idaho Transportation Department	RAPCON	radar approach control
ITR	Idaho Training Range	RCRA	Resource Conservation and Recovery Act
KTAS	Knots True Airspeed	RF	Radio Frequency
kW	kilowatt	RMP	Resource Management Plan
Ldn	Day-Night Average Sound Level	RNA	Research Natural Area
Ldnmr	Onset Rate-Adjusted Monthly Day-Night Average Sound Level	ROD	Record of Decision
Lmax	maximum sound level	ROI	Region of Influence
MAILS	Multiple Aircraft Instantaneous Line Source	ROS	Recreation Opportunity Spectrum
MCI	Major Command Instructions	RRP	Rubbleland-Rock outcrop-Pachic Argixerolls
MCL	maximum contaminant level	RRTAC	Raptor Research and Technical Assistance Center
MFP	Management Framework Plan	SAC	Strategic Air Command
mg/l	milligrams per liter	SAM	Surface to Air Missile
mm	millimeter	SCR	Saylor Creek Range
MOA	Military Operations Area	SCS	Soil Conservation Service
MRNMAP	MOA Range NOISEMAP	SEAD	suppression of enemy air defenses
MRU	Military Radar Unit	SECAF	Secretary of the Air Force
MSL	Mean Sea Level	SEL	Sound Exposure Level
MTR	Military Training Route	SHPO	State Historic Preservation Officer
MUA	Multiple Use Area	SIP	State Implementation Plan
NAAQS	National Ambient Air Quality Standards	SO ₂	Sulfur Dioxide
National Register	National Register of Historic Places	SRMA	Special Recreation Management Area
NATO	North Atlantic Treaty Organization	SRP	Snake River Plain
NAWC	Naval Air Warfare Center	SUA	Special-Use Airspace
NCA	National Conservation Area	SWDA	Solid Waste Disposal Act
NDOW	Nevada Department of Wildlife	TCP	Traditional Cultural Property
NAFR	Nellis Air Force Range	TDS	total dissolved solids
NAGPRA	Native American Graves and Repatriation Act	THC	Total Hydrocarbons
NCDC	National Climatic Data Center	T.O.	Technical Order
n.d.	no date	TSCA	Toxic Substance Control Act
NEPA	National Environmental Policy Act	TSD	treatment, storage or disposal
NGB	National Guard Bureau	TSP	Total Suspended Particulates
NHPA	National Historic Preservation Act	USACE	United States Army Corps of Engineers
NM	Nautical Miles	USC	United States Code
NO ₂	Nitrogen Dioxide	USEPA	United States Environmental Protection Agency
NOI	Notice of Intent	USFS	United States Forest Service
NPS	National Park Service	USFWS	United States Fish and Wildlife Service
NWI	National Wetlands Inventory	USGS	United States Geological Survey
O ₃	Ozone	UTTR	Utah Test and Training Range
ODFW	Oregon Department of Fish and Wildlife	VCA	Vertebrate Characteristics Abstract
OGOI	Operation Group Operating Instruction	VFR	Visual Flight Rules
OHV	off-highway vehicle	VOC	Volatile Organic Compounds
ONA	Outstanding Natural Area	VR	Visual Route
ORE	Operational Readiness Exercise	VRM	Visual Resource Management
ORI	Operational Readiness Inspection	WSA	Wilderness Study Area
PAA	primary assigned aircraft	WZ	Wickahoney-Zecanyon
Pb	Lead		
PBR	Precision Bombing Range		
PCB	polychlorinated biphenyl		
PEL	Permissible Exposure Limit		
PILT	Payments in Lieu of Taxes		
PL	Public Law		
PM ₁₀	particulates less than 10 microns in diameter		
POD	Point of Diversion		